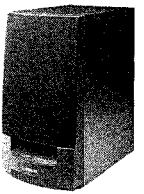
# Digital Loudspeaker Box 70DSS9 40

00B

Service
Service
**Service**



# ServiceManual

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## SPECIFICATION

### General:

| | |
|---|---|
| Mains voltage | : 230V ±10% 50Hz for/00B |
| | : 240V ±10% 50Hz for/05B |
| Power consumption | : ≤140W at 60W output power |
| | : ≤16W at stand by |
| Dimensions: wxhxd | : 205x375x345 mm |
| Weight | : 12.7 kg |
| System | : Digital Active, 2-way |
| Acoustical volume | : 8.5L |
| Total volume | : 26.5L |
| Connectors & signal Levels | : DSS-Link input cinch-type |
| | : Input sensitivity 200mVpp |
| | : Impedance 75Ω |
| | : DSS-Link output cinch-type |
| | : Output level 500mVpp |
| | : Impedance 75Ω |
| Controls | : Left/Right/Mono Rotary |
| | : System A/B/C Rotary |
| | : RC5 Infrared receiver |
| Externally controls | : Volume control by DSS-Link or RC command |
| | : Compensation by DSS-Link or RC command |
| | : Bass & Treble by DSS-Link command |
| | : Standby / ON by DSS-Link or RC command |
| Leds indications | : Red/Green On/Standby/RC-Acknowledge |
| | : Yellow Phase compensation on/off |
| Maximum combination of DSS | : 12 |

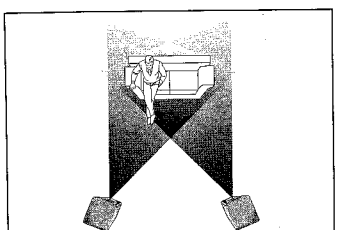
### Amplifier:

| | |
|---|---|
| Output power woofer channel | : 60W RMS at 8Ω (acc IEC 581) |
| tweeter channel | : 15W RMS at 8Ω (acc IEC 581) |
| Volume control | : 0dB to -96dB 1dB/step |
| | |
| Woofer channel | : G class |
| Frequency response | : 20Hz -10kHz ±1dB |
| THD+N (60W/1kHz IEC) | : ≤0.025% |
| Intermodulation Distortion | : ≤0.01% |
| S/N (at Prated) unweighted | : ≥90dB |
| Hum | : ≤10nW |
| Crosstalk to tweeter channel | : ≥ -55dB at 10kHz |
| Bass control | : +5dB to -5dB at 100Hz 1dB/step |
| With Digital compensation | |
| THD+N (60W/1kHz IEC) | : ≤0.03% |
| S/N (at Prated) unweighted | : ≥88dB |
| Hum | : ≤20nW |
| Crosstalk to tweeter channel | : limited by compensation filter |
| | |
| Tweeter channel | : AB class |
| Frequency response | : 100Hz -20kHz ±1dB |
| THD+N (15W/5kHz IEC) | : ≤0.03% |
| Intermodulation Distortion | : ≤0.01% |
| S/N (at Prated) unweighted | : ≥95dB |
| Hum | : ≤10nW |
| Crosstalk to tweeter channel | : ≥ -55dB at 10kHz |
| Bass control | : +5dB to -5dB at 10kHz 1dB/step |
| With Digital compensation | |
| THD+N (15W/5kHz IEC) | : ≤0.03% |
| S/N (at Prated) unweighted | : ≥95dB |
| Hum | : ≤10nW |
| Crosstalk to tweeter channel | : limited by compensation filter |

## INSTALLATION

### SPEAKER POSITIONING

The acoustic behaviour between the loudspeaker and the room is extremely complex and has been the subject of research by engineers and academics for many years. Despite the fact that each domestic room has different acoustic specifications, there are some suggestions that may help to achieve the optimal sound quality in your domestic room. Below you will find some suggestions:



- The loudspeakers should be arranged as symmetrically as possible in the room and at the same height.
- The DSS940 performes best when the tweeter is placed on ear-height when you are sitting ± 1 meter from floor till top of the speaker). This can best be achieved by using special loudspeaker stands (see accessories) or by placing the loudspeakers on a bookshelf. Using spikes between the DSS and the stand and/or using spikes between the stand and the floor improves the quality of the low sound.
- The best stereo effect is obtained when the distance between the two loudspeakers is equal to the distance between each of the loudspeakers and the listener, so that the listener and the loudspeakers form an equilateral triangle
- Avoid positioning the loudspeakers in a corner as this causes bass reproduction to be amplified too much.
- Do not place any obstacles in front of the loudspeakers as this affects treble reproduction, causing the stereo effect to be greatly diminished.
  The listener must still be able to 'see' the loudspeakers.
- When placing the speakers on a bookshelf, pay attention to the fact that the digital loudspeaker produces heat which must be allowed to dissipate freely. For this reason do not cover the ventilation slots on the back of the unit and make sure that there is sufficient ventilation around the speaker. A minimum gap of 5 cm is necessary.

The acoustic quality of your listening room is a contributing factor in the overall sound quality of your music system. Therefore it is important to note that your own room acoustics will have an effect on the resulting sound quality of your new Philips loudspeaker system.

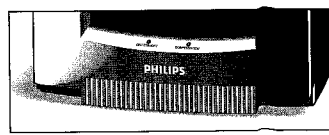
- If your room includes flat, hard walls, floor and ceiling, with few furnishings, you may note a tendency toward brightness in the sound and/or a boomy bass response. This can be compensated for with strategic placement of sound absorbing materials in your listening room. Carpets and drapes are excellent sound absorbing materials.
- If your room is heavily furnished, with thick carpeting and drapes, you may notice that higher frequencies tend to be reduced. Carefull positioning of the speakers toward the listening area can help. In addition to having an effect on the spectral (or frequency) balance of the system, the room acoustics will also have an effect on the stereo imaging.

## OPERATION

### POWER ON/OFF

***WARNING***

**Do not switch on the sets until all connections have been made.**




- Press the POWER ON/OFF key at the back of your speaker.
  The speaker will always enter the standby mode.
  The ON/STANDBY indication will light up red.
  In standby mode remote control commands can be received.
- Speaker system A will become active when the complete set (speakers and DSC) is powered up.
  The ON/STANDBY indication will light up green.
- As soon as the active mode is entered the speaker performs an internal software check and the indicators ON/STANDBY (green) and COMPENSATION (yellow) will light up several times.
- When you switch your DSC to standby, a command is also sent to the speakers to enter the standby mode.
- Press the POWER ON/OFF key again to switch off the power. This is only recommended during long periods of absence, such as holidays.
  Remote control commands cannot be received when the power is switched off.

### DIGITAL SYSTEM CONTROLLER

All communication in the system passes via a master device. This device handles all incoming remote control messages. After processing the command the master usually will send a message to one or more secundary devices.
In a system which incorporates a DSC, this DSC will always be the master device.
The DSC sends signals to the first speaker in the chain. This speaker passes the signals on to the next speaker a.s.o. e.g. Volume settings can be sent via your DSC to your speakers.

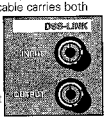
In case your loudspeakers are directly connected to a single digital device, e.g. a CD-player, the first loudspeaker in the chain will be the master device.
E.g. when a volume level is set on a loudspeaker, a message is sent to the other loudspeakers (in the same system) to adapt their volume level as well.

## INSTALLATION

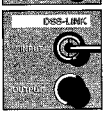
### CONNECTIONS

The DSS940 loudspeaker system can be used in two configurations:

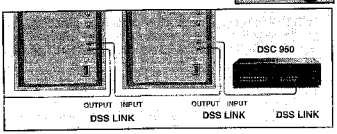
**1** Consisting of a Philips Digital System Controller (e.g. DSC 950) and one or more pairs of DSS940 speakers
All the Digital Speaker Systems are hooked up to the DSC through the DSS link. This single coaxial cable carries both the stereo audio signal and the control signals for parameters such as volume and tone control.



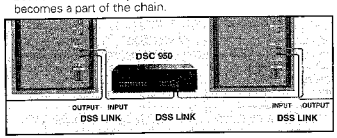

- Connect the coaxial cable from the DSS link output of your Digital System Controller to the **DSS LINK INPUT** socket of the first speaker. Then, connect a coaxial cable from the **OUTPUT** socket of the first speaker to the **INPUT** socket of the second speaker.
- Continue these operations until you have connected all your speakers.




***This chain should always be ended by an end plug.***




- It is also possible to connect Digital Speaker Systems to both the DSS-link outputs of the DSC. In this way the DSC becomes a part of the chain.




**2** Consisting of a single digital source (e.g. a CD player) and one or more pairs of DSS940 speakers.

- Connect the coaxial cable from the digital output socket of your CD player (or other digital source) to the **DSS LINK INPUT** socket of the first speaker. Then, connect a coaxial cable from the **OUTPUT** socket of the first speaker to the **INPUT** socket of the second speaker.
- Continue these operations until you have connected all your speakers. Pay attention to always insert an end plug in the **OUTPUT** socket of the last speaker in a chain.

### CHANNEL

With the CHANNEL switch on the back of your DSS940 you can select the left, mono or right signal.

- Set the switch to RIGHT when the you want the speaker to reproduce the right channel.
- Set the switch to LEFT when you want the speaker to reproduce the left channel.

### SPEAKER SYSTEM A/B/C

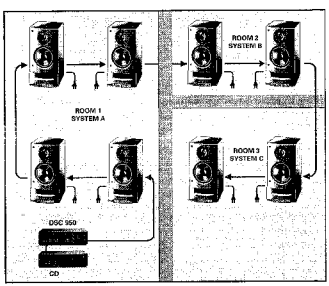
Up to 6 pairs of speakers grouped into 3 separately controllable systems can be interconnected, and controlled from one DSC or digital source.

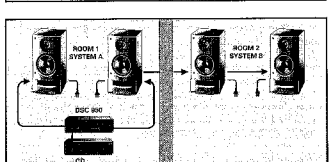
One single coaxial cable (DSS link) connects all the components.
With the SPEAKERS switch on the back of your DSS940 you can select system A, B and C.

Make sure that all the speakers in one room have the same system setting and that the DSC is placed in room 1 (system A).

***Note:*** The maximum length of a DSS Link cable between two speakers is 20 meters.

Below please find two examples of connecting your Digital Speaker Systems.




- With the supplied remote control you can set the volume level for each speaker system separately. In this way the volume level in one room can be set at a higher level than in another room.

- All speakers are supplied with an infra-red remote control eye. The components in your system (provided they are part of the Philips 900 series) can be controlled from each room by pointing your system remote control at a DSS940 speaker. The remote control commands will automatically be passed on to your DSC which will pass on the commands to the signal source (e.g. 900-series tuner).
Pay attention that the 900 series components are connected to each other via the ESI BUS sockets (green cables).

## COMPENSATION

Each DSS940 has a built-in Digital Signal Processor.
This Digital Signal Processor compensates the natural physical characteristics of the speaker system, to obtain linear amplitude and linear phase reproduction.

This compensation is active when the COMPENSATION indicator (yellow) lights up. You will then receive the optimal sound reproduction quality.

The compensation can only be switched off on the DSC. Only when it is switched off, the tone controls bass and treble can be used.
The use of the tone controls BASS and TREBLE is ***only*** recommended to correct sources of poor quality like AM radio reception.
For digital sources like CD and DCC the use of the tone controls is not recommended.

## REMOTE CONTROL

Each DSS940 has an infra-red remote control eye. Therefore the remote control can be pointed to any speaker in your room. The remote control commands will automatically be passed on to the other speakers and your DSC.

With the remote control the following functions can be operated:
- **Speakers A**: switching speaker system A on and off (standby).
- **Speakers B**: switching speaker system B on and off (standby).
- **Speakers C**: switching speaker system C on and off (standby).
- **Volume** : increasing and decreasing the volume level per speaker system.
- **MUTE** on/off: to attenuate the sound by 24 dB.
- **STANDBY**: press more than 1 second to switch all units in your system to standby.

When a remote control command is received, the ON/-STANDBY indicator starts blinking (orange).
With the remote control(s) of your Philips 900 series system you can also control your total system via the loudspeakers

## MAINTENANCE

The Philips DSS940 loudspeaker system is finished in high quality black foil on the top and sides of the cabinet.
We recommend that the cabinet be dusted at regular intervals. You may also use a household furniture polish in very small amounts.

The front baffle is finished in a black lacquer. To clean the baffle, slightly dampen a clean soft cloth with water and a small amount of window cleaner, then wipe carefully to remove any dust and/or fingerprints.
Then, wipe off the baffle using a clean dry cloth.
Do not use any polish or furniture oil on the baffle.

## TECHNICAL SPECIFICATIONS

*(Subject to modification)*

**System**: Digital Active, 2-way

**Frequency response**: 40-20.000 Hz, ± 1.5 dB
35-20.000 Hz, ± 3 dB

**Phase linearity**: ± 10°, 350-19.000 Hz

**Crossover frequency slope**:
2800 Hz (Acoustical, -6 dB, 36 dB/octave

**Amplifiers**
Low frequencies: 75 Watt Cont.(IEC) / 260 Watt Peak
High frequencies: 20 Watt Cont.(IEC) / 50 Watt Peak

**D to A converters**
Low frequencies: Continuous calibration bitstream, 128 x Oversampling
High frequencies: Continuous calibration bitstream, 128 x Oversampling

**S/N ratio**: up to 100 dB

**Channel separation**: infinite

**Sampling frequencies**: 32 / 44.1 / 48 kHz

**Connectors**
DSS-link input: Cinch, IEC968 compatible (0.5 Vp-p, 75 Ohm)
DSS-link output: Cinch (0.5 Vp-p, 75 Ohm)

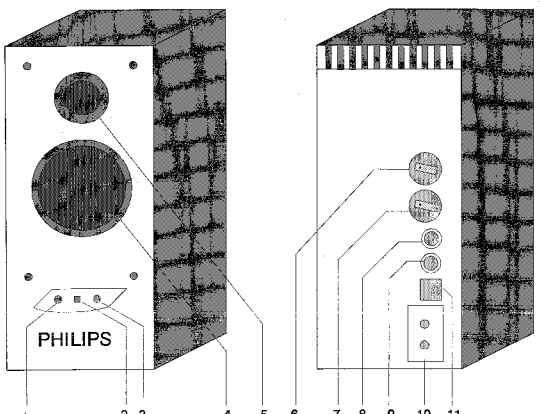
**Speakers**
Woofer: 7 inch glass fibre
Tweeter: 1 inch soft dome

**Enclosure**:
Dimensions (H x W x D): 375 x 205 x 360 mm
Acoustic volume: 8.5 litre
Material cabinet: 19 mm MDF
Material baffle: PMC
Weight: 12 kg

## ACCESSORIES

| | |
|---|---|
| – Stands | FV 105: Speaker stand with spikes (2 stands in one carton) |
| – DSS-link | FV 120: 1 x 20 mtr., with goltplated Cinch |

## CONTROLS & CONNECTIONS



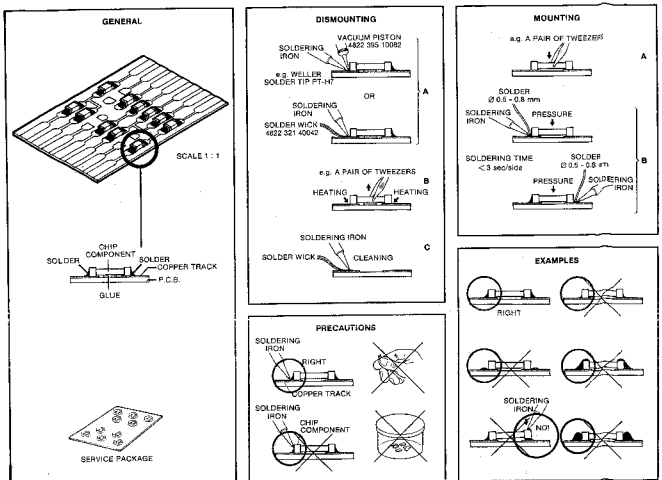

| | | Pos.nr. |
|---|---|---|
| 1 | ON / Standby Led | 6575 |
| 2 | IR Eye | 7575 |
| 3 | Compensation Led | 6576 |
| 4 | Woofer | 1005 |
| 5 | Tweeter | 1002 |

| | | Pos.nr. |
|---|---|---|
| 6 | Switch Left/Right/Mono | 1500 |
| 7 | Switch Speakers A/B/C | 1501 |
| 8 | DSS IN connector | 1400 |
| 9 | DSS OUT connector | 1400 |
| 10 | Mains Input | 1270 |
| 11 | Power Switch ON/OFF | 1272 |

## SERVICING HINTS

In the set chip components have been applied.

For disassembly of chip components see the figure bellow.




## DISMANTELING INSTRUCTIONS

Access to the box :

- Take off the cloth grill (item 51)
- Pull out the four grommets ( item 52)
- Remove the window (item 50) by pulling firmly
- Unscrew the six visible screws using a Torx (T-10) screw driver (ϕ4 x 20 mm.)
- Take the front off the cabinet.

Servicing the tweeter :

- Remove the glue from around the tweeter cables (where they pass through the front panel)
- Unscrew the bolt M5 * 20
- Disconnect the tweeter (item 1002)
- Take the tweeter out from the front.

Servicing the woofer :

- Disconnect the woofer (item 1005)
- Unscrew the four woofer mounting bracket screws (ϕ4 x 17 mm.) and remove the mounting brackets (item 51)
- Replace the woofer (item 1005)

Servicing the display :

- Remove the glue from around the flatcable (where it pass trough the panel item 59)
- Unscrew the two screws (ϕ4 x 13), use a Torx (T - 10) headed screw driver
- Take off the partition plate item 59
- Remove the PCB and ledholder from the partition plate by unscrewing the two visible screws (ϕ 3,5 x 13 mm)

## POLARITY CHECK

You can check the speaker polarity with a battery of 1,5 volts up to 3 Volts.
When the speaker is connected "in phase" the speakercone
is always moving forwards. It means the + of the battery is connected with the + of the speaker.
To ensure a good performance it is necessary that the box has no airleaks.
Cable passages and partition plates must be glued airtight.

## SERVICE TEST PROGRAM

With this testprogram we can generate two sinuses,one of 5168Hz for the tweeter circuit and one of 172Hz for the woofer circuit.The DSP Board generates these two sinuses

To go in the testmode we have to connect first on the digital part pin 19 of IC7500 to the +5VD.
Connect a CD player (digital output) to the DSS box. This is needed for having EBU signal.

When this is done put the CD & Box power ON. Volume can be controlled by remote control in 3 steps.
It is also possible to connect the CD player via a DSC950 to the Box. With DSC950 volume can be controlled by hands or remote control
To go out of this service mode switch power off, and disconnect pin 19 of IC7500 off the +5VD.

## FUNCTION EXPLANATION OF THE ABBREVIATIONS

| | |
|---|---|
| STBY Led: | drive signal for the bicolor standby/on led. |
| IR sig: | output signal of infrared remote control detector unit. |
| COMP ON (LED): | drive signal for the yellow led; compensation indicator. |
| DEEMPH1,DEEMPH2: | drive signal for the DAC deemphasis filter. |
| PWD: | mains failure indication. |
| CBL: | channel status clock; is used to determine the sample frequency. |
| DSP IIC READY: | indicates that the DSP has completed its internal startup program. |
| DSPCLK: | clock drive signal for the DSP. |
| DSPRESET: | drive signal for the DSP reset pin. |
| EBU KILL: | kills the EBU output to the next speaker in the chain; used at startup of the speakers. |
| EELHB: | Enhanced Easylink signal from the host up to the EEL bus. |
| EELBH: | Enhanced Easylink signal from the EEL bus to the host up. |
| IREYE: | output of infrared remote detector circuit. |
| EMPH: | indicates emphasis is applied on the input EBU signal. |
| (emphasis: | filtering on high tones to increase S/N ratio. |
| SDA,SCL: | standard IIC signals (clock,data). |
| RXP,RXN: | differential input of the Audio Digital Interface Circuit (ADIC). |
| FILT: | loop filter of the ADIC's internal PLL. |
| SDATA: | serial data (=audio) of the IIS standard. |
| SCK: | bitclock (BCLK) of the IIS standard (freq.=64 times sample frequency). |
| FSYNC: | word select (WS) of the IIS standard (freq.= sample frequency). |
| MCK: | master clock in the digital system (freq.= 256 times sample frequency). |
| ERF: | (out of lock) indicates the PLL of the ADIC is locked on the EBU signal. |
| VOL,VOR: | analog outputs (woofer,tweeter) of the DAC. |
| VREF: | internal voltage reference of the DAC (=1/2 VDD). |
| VDD...: | positive supply (5V). |
| VSS...: | ground. |
| DIN,DOUT: | data in or output of the IIS standard. |
| IIS: | standard to transport digital audio signals, three wire connection. |
| AUDIO/DATA: | indicates whether the input signal is audio (music) or data (CD-ROM). |
| VD | Voltage Digital |
| VA | Voltage Analog |

## ADJUSTMENTS

### Quiescent Current:

Before applying power:

- Check for good thermal contact between power transistor and heatsink.
- Mains Voltage 230V ±5%
- Ambient temperature =20° ± 5° and heatsink must be at ambient temperature.
- Connect voltage probes across resistors pairs 3305-3307 = testpoint 1-2 (Woofer curcuit).
- Connect voltage probers across resistors pairs 3304-3306 = testpoint 3-4 (Tweeter curcuit).
- The adjustment must be finished for both channels 30sec after power on.

After applying power:

- Place the BOX in stand-by position.
- Woofer channel: Turn slowly potmeter 3285 to 15.4mV +10% -5% is measured.
- Tweeter channel: Turn slowly potmeter 3284 to 15.4mV +10% -5% is measured.

### Adjustment procedure after a woofer or tweeter repair.

Equipment:

sinewave generator: Vout= 0.5 Vrms
DSC 950: volume = -40 dB, input attenuation = 0dB
Voltmeter: floating ground connection

Adjust the woofer channel:

Level adjustment:
Put in a sinewave of 400 Hz. Measure the voltage at the woofer terminals.
(Remember: woofer ground is not ground of the set !!)
Adjust potmeter R3459 untill the terminal voltage is the value in the table, corresponding to the sensitivity of the replacement speaker.

Negative impedance circuit adjustment:
Wobbie or sweep a sinewave between 35 and 45Hz.

Measure the voltage at the woofer terminals, woofer connected ! The voltage peaks at a certain frequency in this range, depending on the woofer and the adjustment of potmeter R3386. Adjust R3386 untill the peak of the voltage is the value in the table, corresponding to the sensitivity of the replacement speaker.

Adjust the tweeter channel:

Level adjustment:
Put in a sinewave of 5000 Hz. Measure the voltage at the tweeter terminals.
Adjust potmeter R3460 untill the terminal voltage is the value in the table, corresponding to the sensitivity of the replacement speaker.

| Sensitivity | woofer level | neg ouput | tweeter level |
|---|---|---|---|
| 91.5dB | 184 mV | 0.977 V | 134 mV |
| 91 dB | 195 mV | 1.035 V | 142 mV |
| 90.5dB | 207 mV | 1.097 V | 150 mV |
| 90 dB | 219 mV | 1.163 V | 160 mV |
| 89.5dB | 232 mV | 1.232 V | 169 mV |
| 89 dB | 246 mV | 1.306 V | 179 mV |
| 88.5dB | 261 mV | 1.383 V | 190 mV |
| 88 dB | 276 mV | 1.465 V | 201 mV |
| 87.5dB | 292 mV | 1.552 V | 213 mV |

## CIRCUIT DESCRIPTION

### DSS link transceiver

The DSS link transceiver is the connecting link to the DSC950 digital system controller and the other DSS940 speakers in the system.
It receives the digital audio information (SPDIF format), buffers it to the ADIC and transmits it on the output to the next speaker. It separates the encoded EEL information from the input, sends it to the host micro-processor and the DSS link output.
It takes EEL information from the host microprocessor and sends it on both input and output cinch.

### ADIC

The ADIC (audio digital interface circuit) decodes the 1 wire IEC958 digital signal into the 3 wire IIS signal (data, bitclock, wordclock). It also generates the masterclock (256 x sample frequency) by a PLL mechanism. It provides several control signals: locking state of the PLL, audio/data information, emphasis applied and a channel status clock (CBL) which is used to determine the sample rate of the input signal.

### DSP (XC56004)

The DSP or digital signal processor is a fast microprocessor dedicated to process digital audio information. In the DSS940,it selects an audio channel (Left/mono/right) and performs a filtering program on it, to provide for a cross-over function, a phase compensation, bass & treble boost or cut and a volume control function for woofer and tweeter channel.
It communicates the audio information by a IIS input and output. The program and several parameters/commands are downloaded from the host microprocessor by an IIC interface. The DSP has two output pins: a "digital silence" pin which mutes the amplifier, and a handshake line to the host microproc.
The clock of the DSP is provided by a internal clock generator of the host microprocessor.

### DAC (TDA1305)

The DAC (digital to analog) convertor converts the digital information to an analog signal driving the power endstage.
It has an internal digital deemphasis filter for 32kHz, 44.1kHz and 48kHz sample rate.

### Analog volume control

The analog volume control provides a 6, 12 and 18dB attenuation on woofer and tweeter channel by shorting resistors to ground. The total volume control of the DSS940 is composed of an analog and digital attenuation.

### Power endstage

The power endstage delivers the necessary power to drive the speakers.
The woofer channel is a class G amplifier of 60 watts into 8 ohms. The tweeter channel is a class B stage of 15 watts into 8 ohms. The woofer channel contains a sommator and feedback circuit for the negative output impedance mechanism.

### Negative impedance circuit

The woofer channel has a positive feedback of the woofer current to the input of the channel. A low-pass filter limits this action to a frequency range of approx. 100 Hz. This circuit acts as a virtual negative impedance in the speaker output. The negative impedance gives a load impedance dependant boost of the output signal.

### Host microprocessor

The host microprocessor is the controller of the complete DSS940 speakerbox. It contains the user interface software, the DSP program and provides EEL and IR remote control reception.

### Input signal

The input signal to the board is a DSS link type digital signal.
The DSS link signal is a combined SPDIF (EBU consumer mode) and Enhanced Easylink signal. A suitable DSS link signal generator is the DSC950 digital system controller. Audio signals can be fed in at digital and analog inputs.
EEL information exchange is provided by a standard EEL bus socket.
If no DSC950 is used, any source providing a SPDIF output can be used.
In this operating mode, commands to the DSS940 can only be send by IR remote control.

## FAULTFINDING and REPAIR GUIDE

### 1. Check the powersupply:

Before measuring the signals in the system, we have to check if all power supplies are functional.

Apply mains power and switch the set on.
On the powerstage of the unit, check the +Vh,-Vh,+Vl and -Vl supplies (52V,-52V,26V,-26V).
If one or both of these voltages are not available, check the fuses 1250 till 1253.
Most of the time this indicates a powerstage failure (transistors 7268 till 7275).
Check the voltages V+A and V-A (11V,-11V).
Failure of these voltages indicate a problem around the opamps 7255,7290 or 7291.
Check also resistors 3270 and 3271.
Check the auxilary supplies (+8,-8,+5VD,+5VA).
Failure of these voltages indicate a problem on the digital section of the unit.
Check also fuses 1259 and 1260.

### 2. Start-up of the unit:

After we checked the powersupplies of the unit, we will power-up again to check the start-up sequency of the unit (initialisation of the Ic's).

Switch the set off.
Connect a digital source (DSC950 or CD player) to the DSS link input (cinch 1400 upper inlet).
Connect the cinch plug 75ohm (item 57) on the DSS link output (cinch 1400 lower inlet).
Make sure there is a digital signal available on the input (put CD in play mode).
Switch on the set.
During switching on, monitor the SDA and SCL lines on the Host µP (IC7500 pin 21/22) or the DSP (SUB 1401 pin 11/14). During approx. 0.5 seconds pulses should be seen on both lines, indicating the Host µP is initialising the DSP unit.
After this, both lines should go high (+5V), except when an action is occuring (remote control, volume, changing source etc.).
If there is continuous communication on the SDA and SCL lines, or if the DSPRESET line is continuously being pulsed low this indicates something is wrong with the DSP unit (1401).
Check also the DSP-IC-READY line. (SUB1401 pin 9/ IC7500 pin 31) During download it is low, during normal operation it should be high.
Check also the DSPCLK line (SUB1401 pin13/ IC7500 pin 32). It should contain the 31.25kHz clock signal.
Failure of this indicates a problem with IC7500 or the DSP unit 1401.
After we verified that the DSP is properly initialised by the Host µP, we can further check the flow of signals in the set.

### 3. Normal operation:

Check the signal at pin 2 of cinch 1400 (input pin).
This shows the input EBU signal (amplitude 0.2 till 0.5 Vpp).
Failure indicates a bad soldering or contact at the cinch 1400.
Check the signal at pin 2 of IC 7400.
This contains the amplified EBU signal at 5V level.
Failure of this indicates a problem with IC 7400 or its surrounding components.
The EBU signal is fed to the ADIC which decodes the information.
When the information is valid, pin 25 of the ADIC (IC7402) goes low.
If this pin remains high, either the input signal is corrupted or IC7402 is defective. (Check the power supply at the pins of the IC !!).

NOTE: when pin 25 of IC7402 is high, the system does not become active and is muted.
Now we checked that the ADIC is functional.
It decodes the EBU stream into 4 signals:
WCLK, BLCK, DIN and MCLK (test signals 5,6,7), which contain the audio information.
Check these signals at the ADIC pins, the DSP connector pins and the DAC (IC 7403).

Now we check the DSP unit which does processing on the digital signal.
Check the DOUT pin of the unit (pin 6).
This should show a signal similar to the DIN pin (pin 2), depending on the volume level of the set.
If the volume level = -- dB, or if the input signal is "silence", the line is continuously low. If the silence (signal level <= -60dBFS) is longer than 8 seconds, also the DIGSL line will go low (SUB 1401 pin 1), muting the amplifier.

When the digital signal is processed by the DSP, it is fed to the DAC (IC 7403) to be converted to the woofer and tweeter analog signal.
Check voltage on pin 22 and 25 of IC 7403.
It contains the music signal "riding" on a 2.5V DC level.
Failure of this indicates a problem with IC 7403. (Check the power supply on the pins of the IC !!)

After the DAC, the analog signals are attenuated by a programmable resistive divider (TR7413 till TR7418).
TR7419 and TR7420 can mute the signals.
This divider can attenuate the signal by 0, 6, 12 or 18 dB, depending of the volume level of the speaker.
The transistors 7413 till 7420 are switched with a slow slope to avoid clicks (TR 7423 till 7426).
If you experience volume control behaviour (f.i. the level goes up instead of down) check these components.

**4. Communication with the DSC950:**

Communication with the DSC950 controller is done by mixing Enhanced Easylink signals on the DSS link bus, both to the input inlet as to the output.
The hardware responsible for this action is IC7401 and its surrounding components.
The Host µP receives and sends signals by pin 37/36 (receive) and pin 35 (transmit). During communication, you find here pulses as indicated on the schematic.
On the input and output (cinch 1400), the EBU signal is shifted according these pulses.
When the bus is idle, a low level is expected.

NOTE: FOR PROPER OPERATION, IT IS REQUIRED THAT THE TERMINATOR PLUG IS MOUNTED !

When an error occurs on the DSS link, the message is repeated until transmitted properly.

So, if there is a malfunction (short circuit etc.), there is constant EEL communication on the bus, or the pins 35 till 37 of IC7500 are constantly high.

NOTE: during startup of the DSS940 or the DSC950, there is a communication in the system to determine if there is a DSC950 connected to the system.
If there is a DSC950 connected, all of the speakers are put in the "slave" mode. If there is no DSC950 connected, the speakers are put in "master" mode.
So, if you change connections in the system, always switch the DSC950 or the DSS940 on and off to properly initialise the system.
Make sure all sets in the room with the DSC950 are set to room A (switch 1501).

## WARNINGS

### GB WARNING

All $IC_s$ and many other semi conductors are susceptible to electrostatic discharges (ESD).
Careless handling during repair can reduce life drastically.When reparing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

### NL WAARSCHUWING

Alle ICs en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD)
Onzorgvuldig behandelen tijden reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat U tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat. Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

### D WARNUNG

Alle $IC_s$ und viele andere Halbleiter sind empfindlich gegenüber electrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kan die Lebensdauer drastisch reduzieren. Veranlassen Sie, dass Sie im Reparaturfall über ein Pulsarmband mit Widerstand verbunden sind mit dem gleichen Potential wie die Masse des Gerätes.
Bauteile und Hilfsmittel auch auf dieses gleiche Potential halten.

### F ATTENTION

Tous les IC e beaucoup d'autre semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévité pourrair etre considérablement écourtée par le fait qu'aucune precaution n'est prise à leur manipulation.
Lors de réparations, s'assurer de bien etre relié au meme potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.
Veiller á ce que les composants ainsi que les outils que l'on utilise soient également á ce potentiel.

### I AVERTIMENTO

Tutti IC e parecchi semiconduttori sono sensibili alle scariche statiche. (ESD)
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell apparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

## SAFETY

### GB

Safety regulations require thatthe set be restored to its original condition and that parts which are identical with those specified be used.

### NL

Veiligheidsbepalingen vereisen dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde worden toegepast.

### D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden für Reparaturen sind Original-Ersatzteile zu verwenden.

### I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizione originali e che iano utilizzati pezzi di ricambiago identici a quelli specificati.

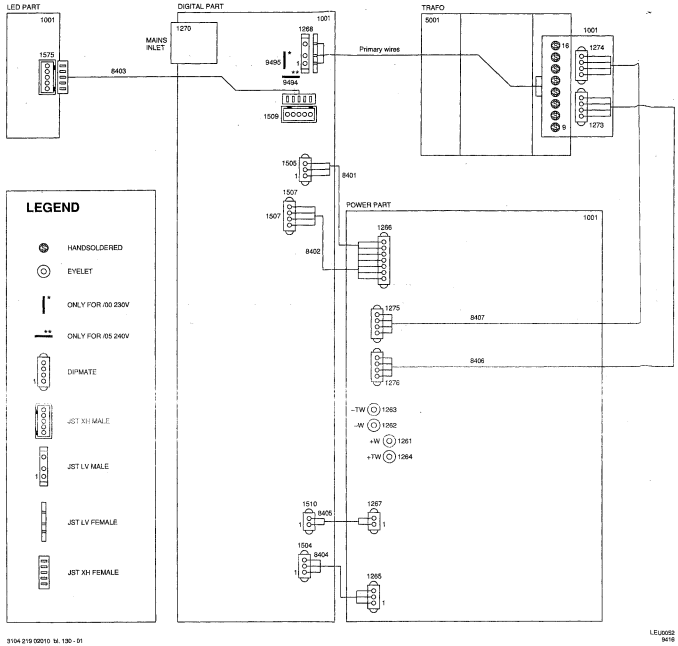
### F

Les normes de sécurité exigent que lappareil soit remis à létat d'origine et que soient utilisées les pieces de rechange identiques à celles spécifiées.

Pour votre sécurité, ces documents doivent etre utilisés par des specialistes agrées, seuls habilités à réparer votre appareil en panne.



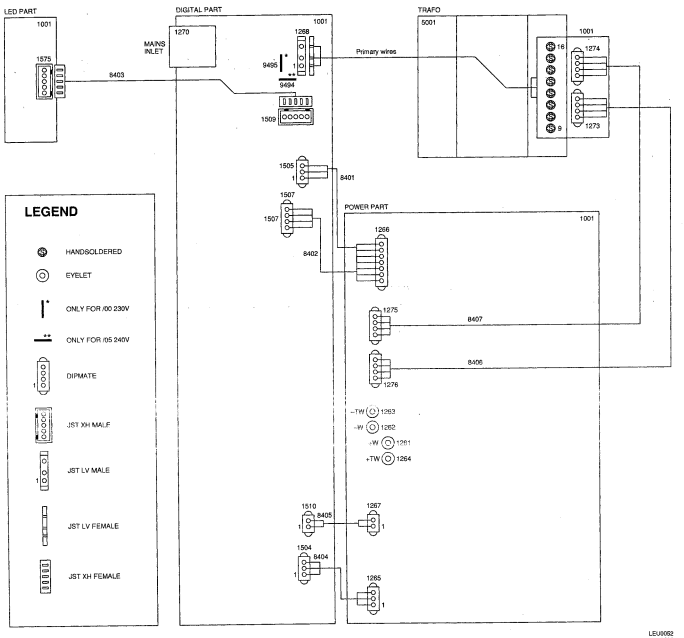
## WIRING DIAGRAM




3104 219 09010 fd. 130 - 01

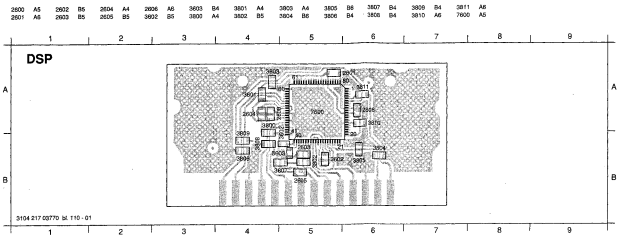
LEU0052 9416

## WIRING DIAGRAM

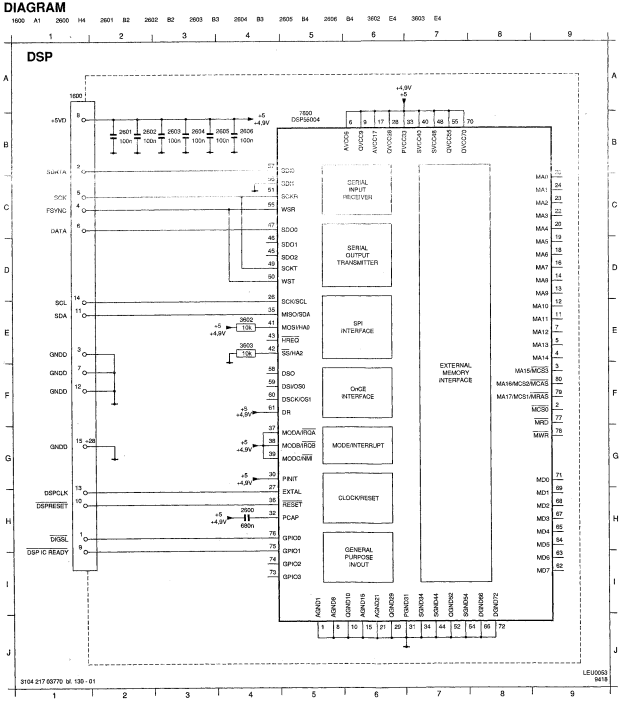




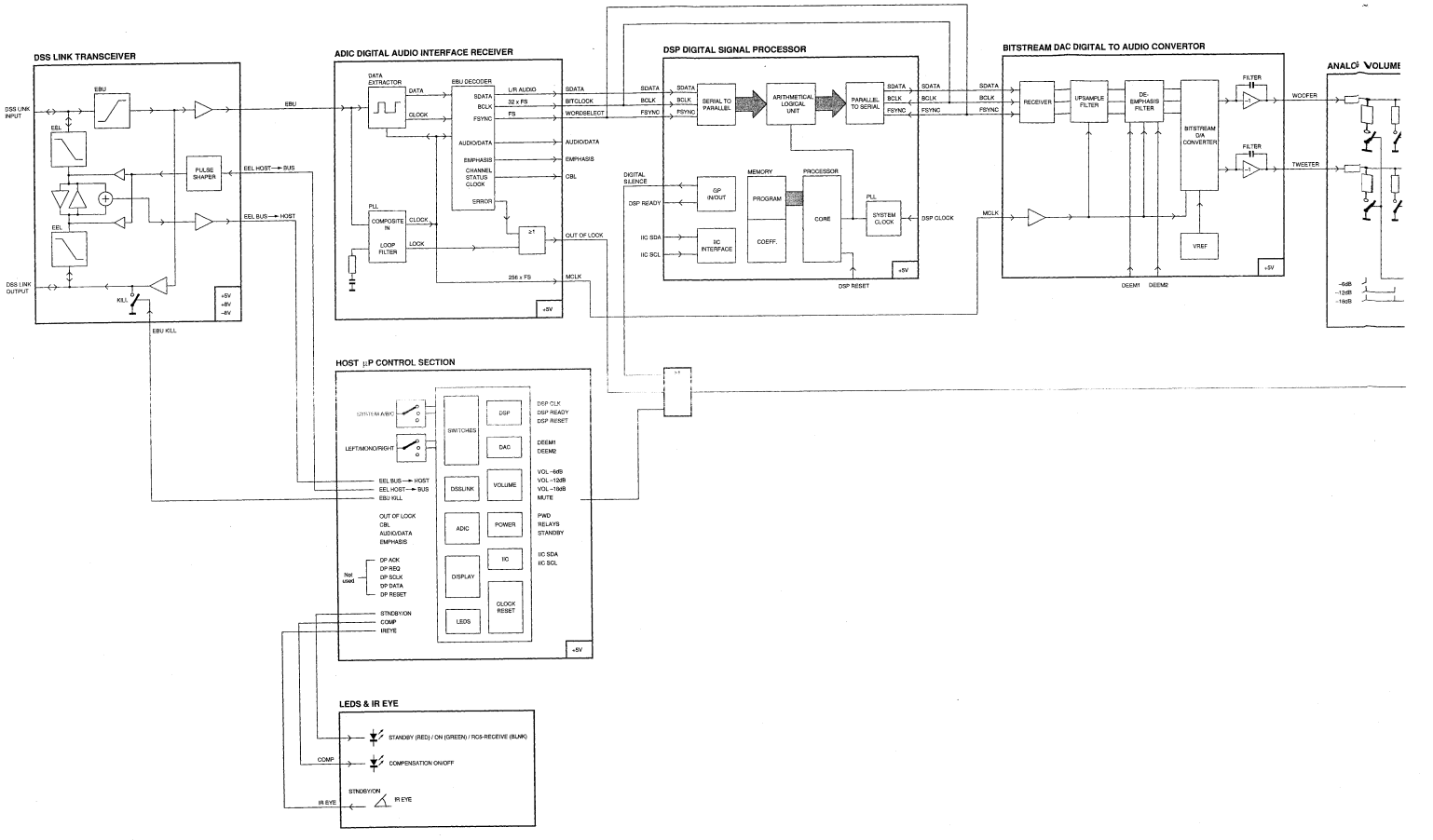

## DSP COMPONENT LAYOUT



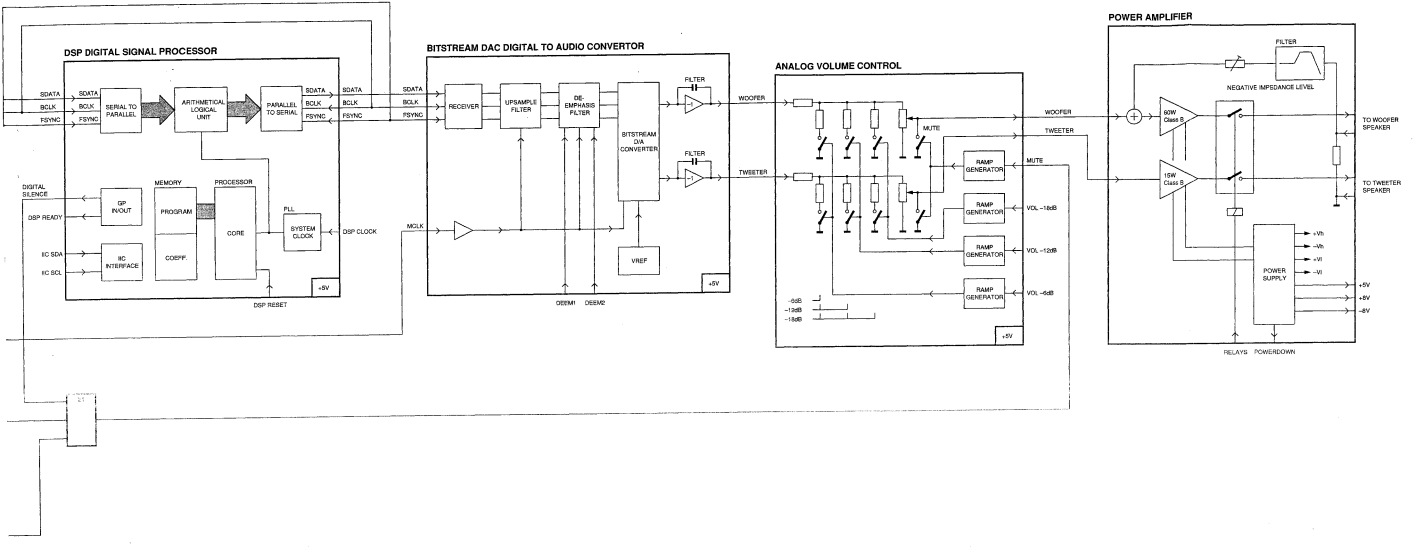

## DSP DIAGRAM



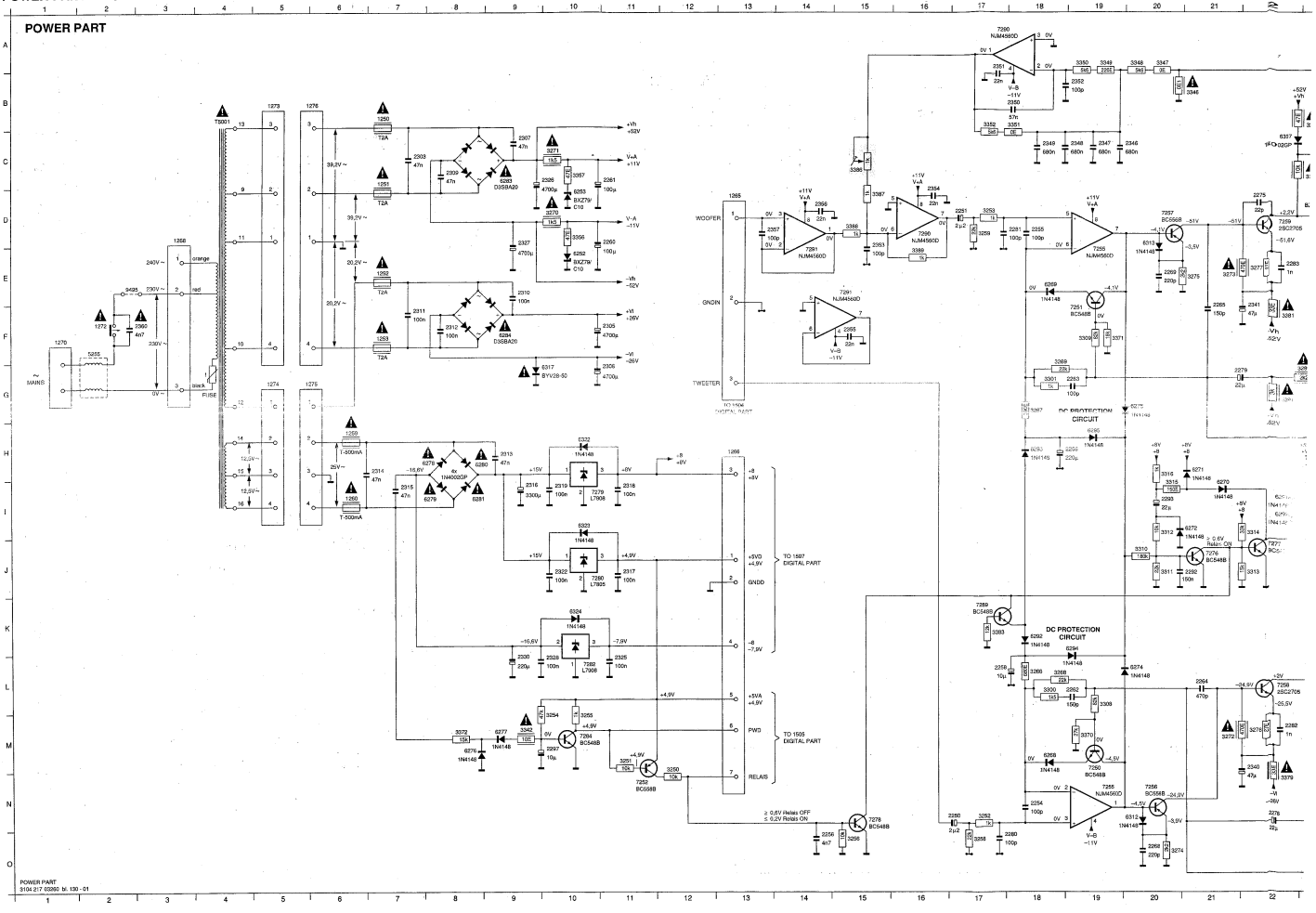
## BLOCK DIAGRAM

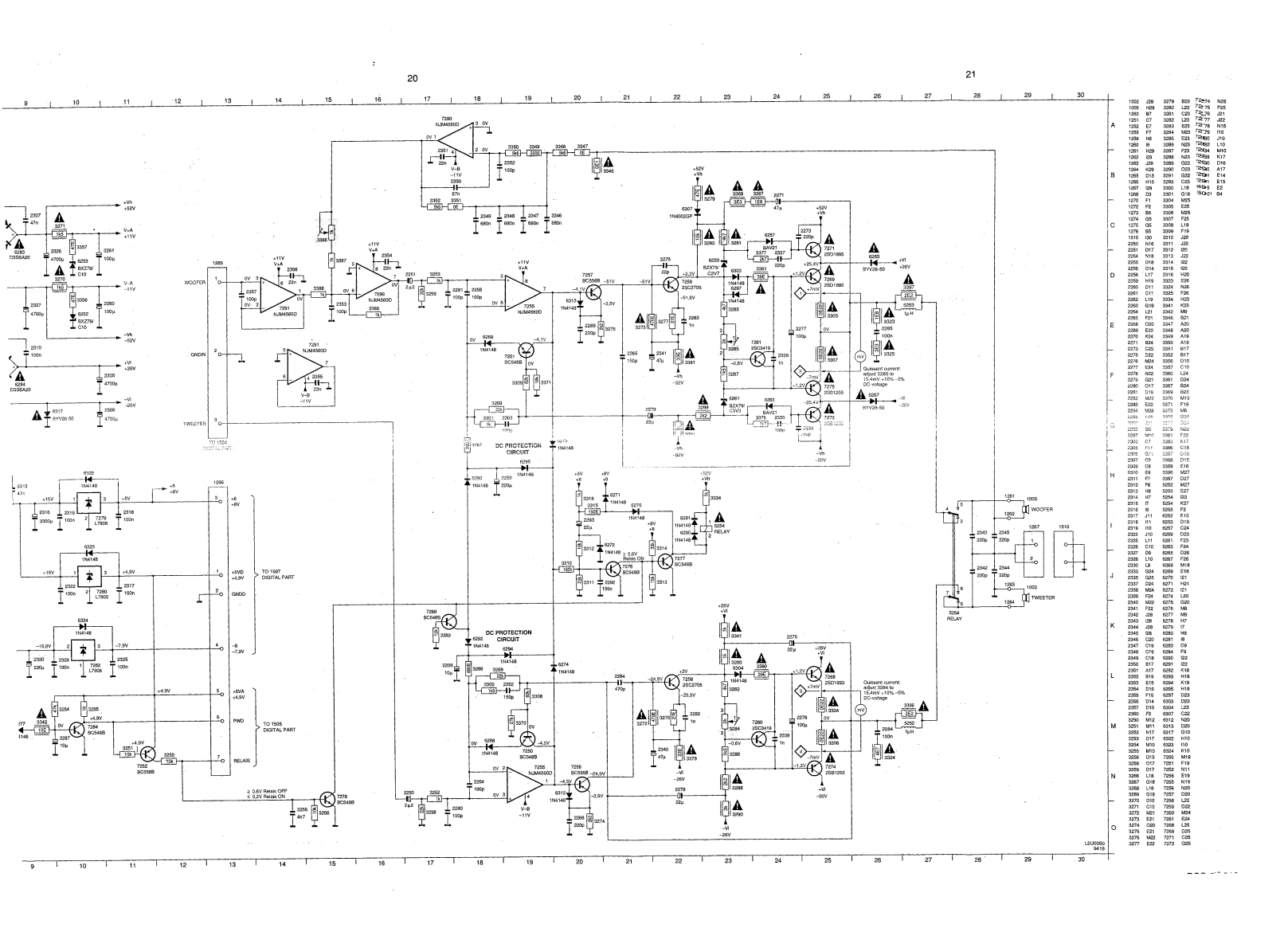


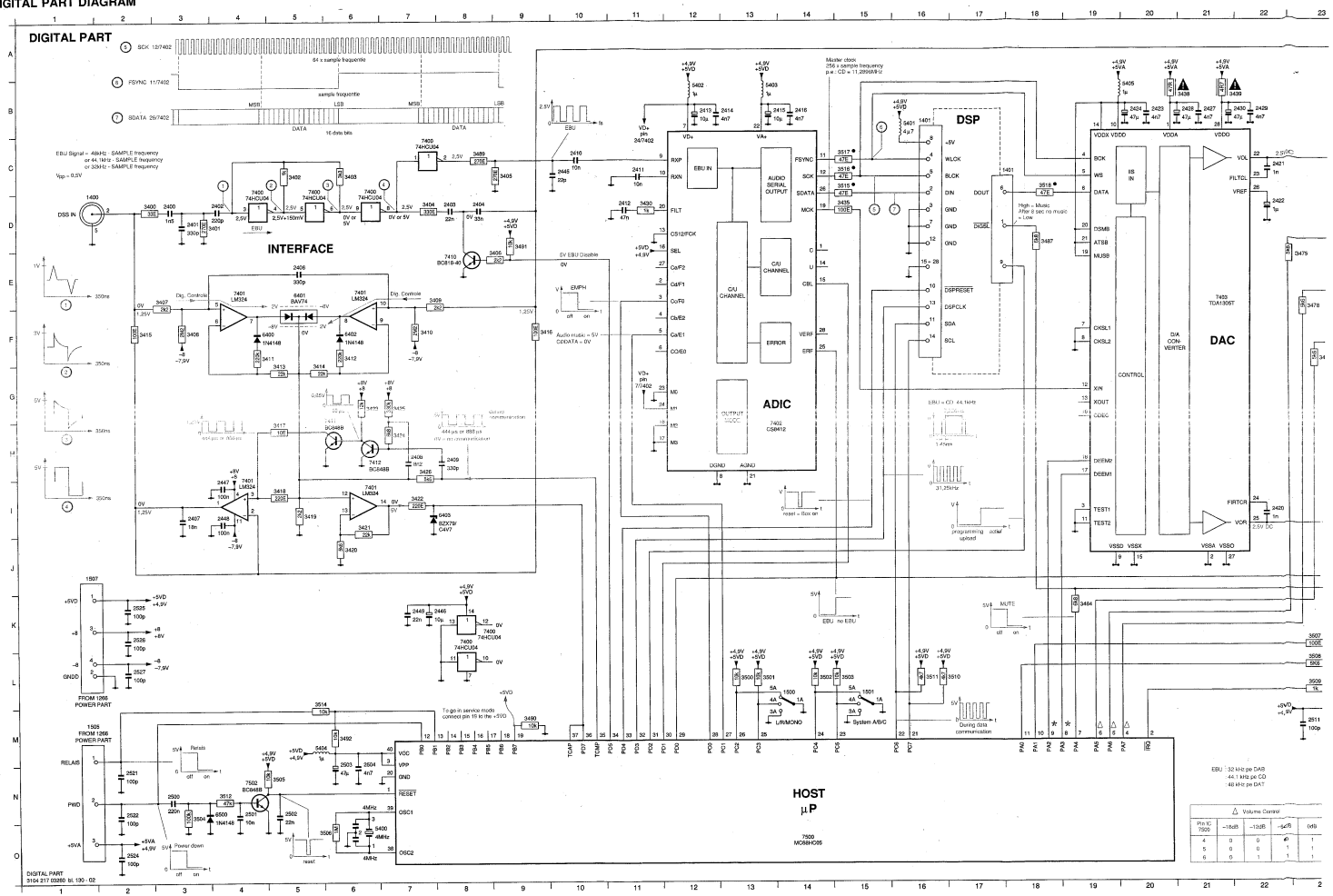

BLOCK DIAGRAM
3104 217 03260 bl. 136 - 01

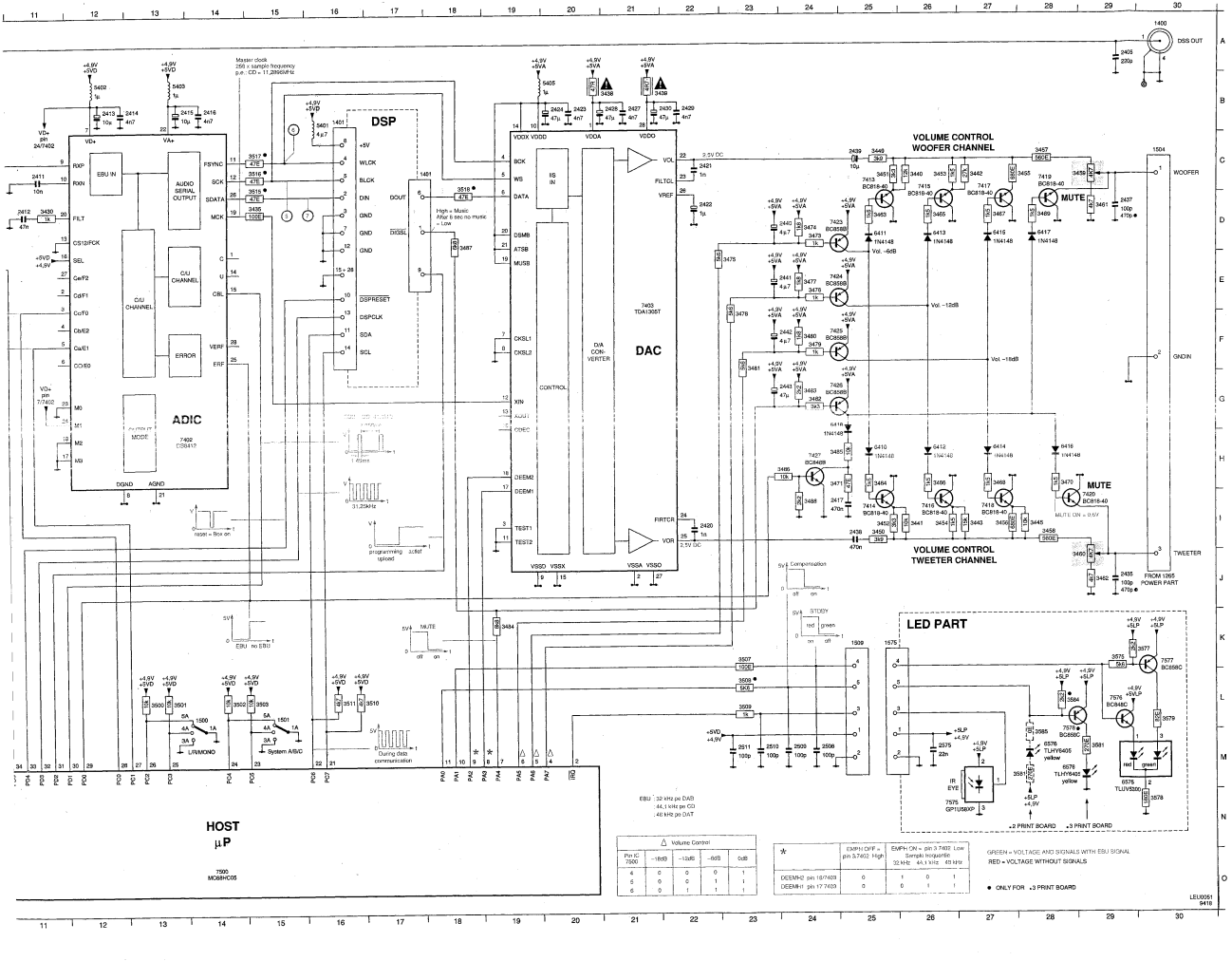

DSP DIGITAL SIGNAL PROCESSOR
SDATA
BCLK
FSYNC
SERIAL TO PARALLEL
ARITHMETICAL LOGICAL UNIT
PARALLEL TO SERIAL
MEMORY
PROCESSOR
PROGRAM
COEFF.
CORE
PLL
SYSTEM CLOCK
DSP CLOCK
GP IN/OUT
DIGITAL SILENCE
DSP READY
IIC SDA
IIC SCL
IIC INTERFACE
+5V
DSP RESET
BITSTREAM DAC DIGITAL TO AUDIO CONVERTOR
RECEIVER
UPSAMPLE FILTER
DE-EMPHASIS FILTER
BITSTREAM D/A CONVERTER
FILTER
VREF
MCLK
DEEM1
DEEM2
WOOFER
TWEETER
ANALOG VOLUME CONTROL
MUTE
RAMP GENERATOR
VOL -1dB
VOL -12dB
VOL -6dB
-6dB
-12dB
-18dB
POWER AMPLIFIER
NEGATIVE IMPEDANCE LEVEL
60W Class B
15W Class B
TO WOOFER SPEAKER
TO TWEETER SPEAKER
POWER SUPPLY
+Vh
-Vh
+Vl
-Vl
+5V
+8V
-8V
RELAYS POWERDOWN

# POWER PART DIAGRAM




WOOFER
TWEETER
RELAY
DC PROTECTION CIRCUIT
DC PROTECTION CIRCUIT
TO 1507 DIGITAL PART
TO 1505 DIGITAL PART
Quiescent current: adjust 3380 to 15,4mV ±10% -5% DC-voltage
Quiescent current: adjust 3384 to 15,4mV ±10% -5% DC-voltage
≥ 0,6V Relais OFF
≤ 0,2V Relais ON
LEU0050
9418

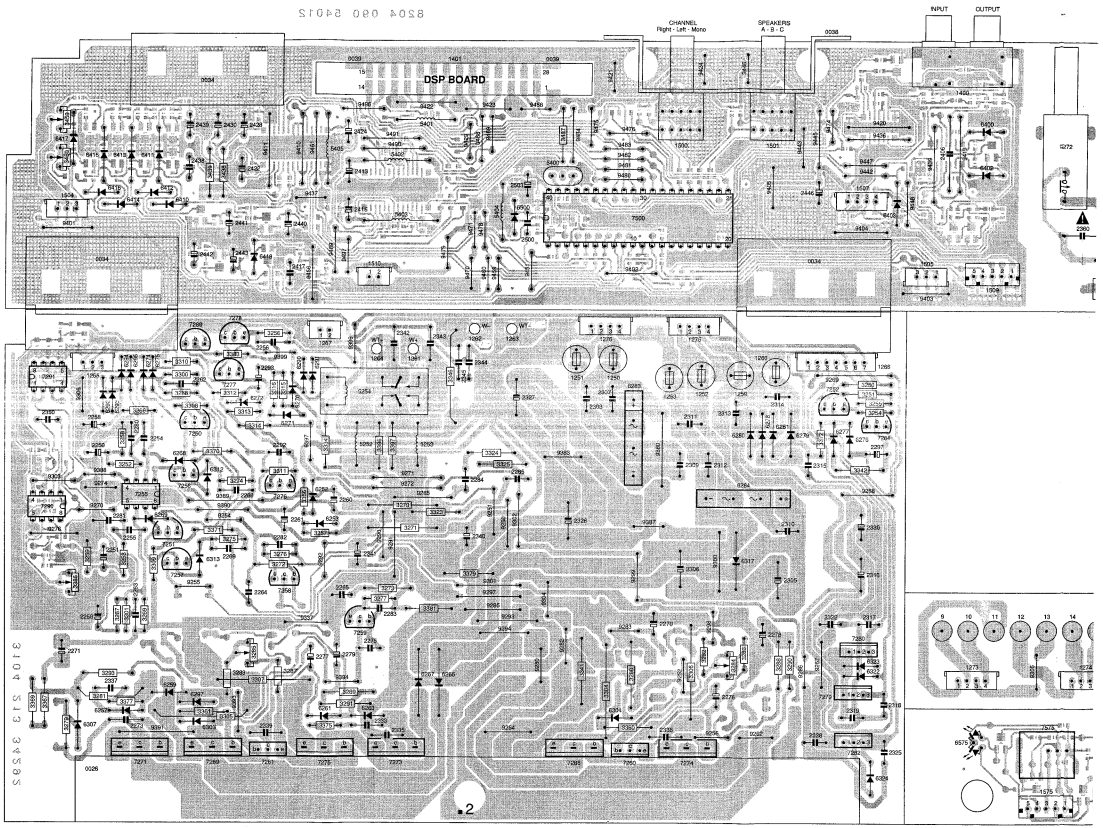

DIGITAL PART
INTERFACE
DSP
ADIC
HOST
µP
DAC
7500
MC68HC05
7403
TDA1306T
7402
CS8412
DIGITAL PART
3104 217 03280 bl. 130 - 02


DSP
ADIC
HOST µP
DAC
VOLUME CONTROL WOOFER CHANNEL
VOLUME CONTROL TWEETER CHANNEL
LED PART
MUTE
WOOFER
TWEETER
GND/N
DSS OUT
FROM 1005 POWER PART
2 PRINT BOARD
3 PRINT BOARD
EBU : 32 kHz pe DAB
44,1 kHz pe CD
48 kHz pe DAT
GREEN = VOLTAGE AND SIGNALS WITH EBU SIGNAL
RED = VOLTAGE WITHOUT SIGNALS
ONLY FOR 3 PRINT BOARD
LEU0061
9416

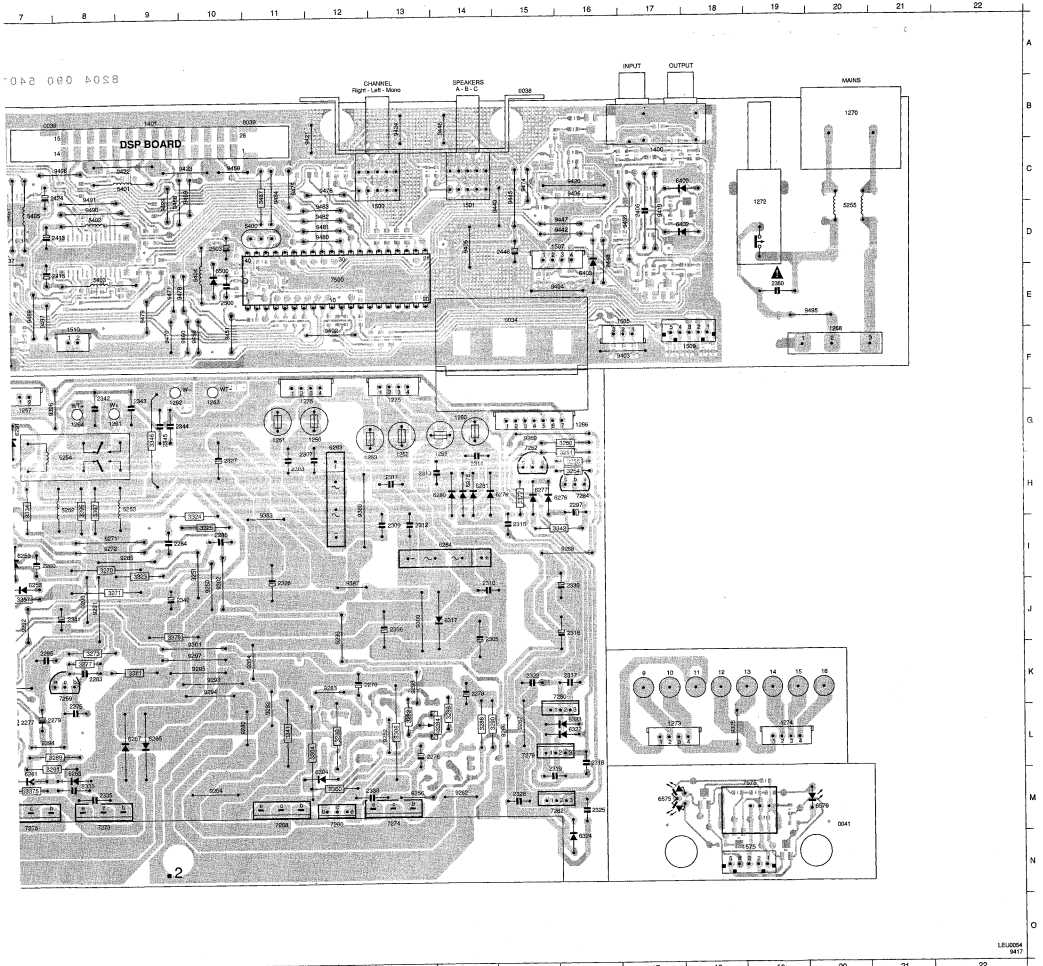
**POWER AND DIGITAL COMPONENT LAYOUT**

**.2 PCB VERSION**

## POWER AND DIGITAL PART LAY-OUT




POWER AND DIGITAL PART
3104 217 03260 tri 110 - 01




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0026 | M3 | 3250 | G16 | 6307 | M3 | 9447 | D16 |
| 0034 | C5 | 3251 | G16 | 6312 | I5 | 9448 | E16 |
| 0034 | E15 | 3252 | I4 | 6313 | J5 | 9451 | F10 |
| 0034 | E3 | 3253 | J4 | 6317 | J14 | 9455 | F7 |
| 0038 | B15 | 3254 | H16 | 6322 | L16 | 9458 | C10 |
| 0038 | E7 | 3255 | H16 | 6323 | L16 | 9459 | F10 |
| 0039 | B11 | 3256 | G6 | 6324 | N16 | 9460 | F10 |
| 0041 | M20 | 3258 | H4 | 6400 | C17 | 9461 | D7 |
| 1250 | G12 | 3259 | J3 | 6402 | D17 | 9468 | C9 |
| 1251 | G11 | 3266 | H4 | 6403 | E16 | 9469 | C10 |
| 1252 | G13 | 3267 | K4 | 6410 | D5 | 9470 | F9 |
| 1253 | H12 | 3268 | G3 | 6411 | D4 | 9471 | E9 |
| 1259 | G14 | 3268 | K4 | 6412 | D4 | 9474 | C15 |
| 1260 | G14 | 3270 | I8 | 6413 | D4 | 9475 | C11 |
| 1261 | G8 | 3271 | J8 | 6414 | D4 | 9476 | C12 |
| 1262 | G9 | 3272 | J6 | 6415 | D3 | 9478 | E10 |
| 1263 | G10 | 3273 | K9 | 6416 | D4 | 9479 | E9 |
| 1264 | G8 | 3274 | I6 | 6417 | C3 | 9480 | D12 |
| 1265 | G3 | 3275 | J5 | 6418 | E6 | 9481 | D12 |
| 1266 | G16 | 3276 | J6 | 6500 | E10 | 9482 | D12 |
| 1267 | G7 | 3277 | K8 | 6575 | M17 | 9483 | D12 |
| 1268 | F20 | 3279 | M3 | 6576 | M20 | 9484 | C11 |
| 1276 | B20 | 3280 | L12 | 7250 | H5 | 9489 | E7 |
| 1272 | D19 | 3281 | L3 | 7251 | J4 | 9490 | D8 |
| 1273 | L17 | 3282 | L13 | 7252 | G15 | 9491 | C8 |
| 1274 | L19 | 3283 | L6 | 7255 | I4 | 9495 | E19 |
| 1275 | G13 | 3284 | L14 | 7256 | I5 | 9496 | C8 |
| 1276 | G11 | 3285 | L6 | 7257 | J5 | 9497 | E7 |
| 1400 | C17 | 3286 | L14 | 7258 | K5 | | |
| 1401 | B8 | 3287 | L6 | 7259 | K8 | | |
| 1500 | D13 | 3288 | L14 | 7260 | M12 | | |
| 1501 | D14 | 3289 | L7 | 7261 | M6 | | |
| 1504 | D3 | 3290 | L14 | 7268 | M11 | | |
| 1505 | E16 | 3291 | L7 | 7269 | M5 | | |
| 1507 | D15 | 3293 | L3 | 7271 | M4 | | |
| 1509 | F18 | 3300 | G5 | 7273 | M6 | | |
| 1510 | E8 | 3301 | K4 | 7274 | M13 | | |
| 1575 | N18 | 3304 | L12 | 7275 | M7 | | |
| 2250 | H3 | 3305 | M5 | 7276 | I6 | | |
| 2251 | J4 | 3306 | L13 | 7277 | G6 | | |
| 2254 | H4 | 3307 | L6 | 7278 | F6 | | |
| 2255 | J4 | 3308 | H5 | 7279 | L15 | | |
| 2256 | G6 | 3309 | J4 | 7280 | K15 | | |
| 2258 | H5 | 3310 | G5 | 7282 | M15 | | |
| 2259 | K3 | 3311 | I6 | 7284 | H16 | | |
| 2260 | I7 | 3313 | G5 | 7289 | F6 | | |
| 2261 | J6 | 3313 | H6 | 7290 | I2 | | |
| 2262 | G5 | 3314 | H6 | 7291 | G2 | | |
| 2263 | K4 | 3315 | G6 | 7500 | E12 | | |
| 2264 | K5 | 3316 | G6 | 7575 | M18 | | |
| 2265 | K7 | 3323 | I9 | 9250 | J10 | | |
| 2268 | I8 | 3324 | H10 | 9251 | I10 | | |
| 2269 | J5 | 3325 | I10 | 9252 | L13 | | |
| 2270 | K12 | 3334 | H7 | 9254 | I5 | | |
| 2271 | L3 | 3341 | L11 | 9256 | J6 | | |
| 2273 | M1 | 3342 | I10 | 9257 | M12 | | |
| 2275 | K6 | 3346 | G8 | 9262 | M14 | | |
| 2276 | L13 | 3356 | J7 | 9264 | M10 | | |
| 2277 | L7 | 3357 | J7 | 9266 | L15 | | |
| 2278 | K14 | 3360 | M12 | 9267 | L15 | | |
| 2279 | L7 | 3361 | M5 | 9268 | I16 | | |
| 2280 | H4 | 3367 | L3 | 9269 | G15 | | |
| 2281 | I4 | 3369 | L2 | 9270 | I3 | | |
| 2282 | J6 | 3370 | H5 | 9271 | I9 | | |
| 2283 | K8 | 3371 | J5 | 9273 | I8 | | |
| 2284 | I9 | 3372 | H15 | 9274 | I3 | | |
| 2285 | I10 | 3375 | M7 | 9276 | J5 | | |
| 2292 | H5 | 3377 | L4 | 9280 | L10 | | |
| 2293 | G6 | 3379 | J9 | 9282 | L11 | | |
| 2297 | H16 | 3381 | K9 | 9283 | K12 | | |
| 2303 | H11 | 3383 | G6 | 9285 | I9 | | |
| 2305 | J14 | 3385 | K3 | 9290 | J8 | | |
| 2306 | J13 | 3396 | H8 | 9291 | J8 | | |
| 2307 | G11 | 3397 | H8 | 9292 | J7 | | |
| 2309 | I13 | 3438 | D5 | 9293 | K10 | | |
| 2310 | J14 | 3439 | D5 | 9294 | K10 | | |
| 2311 | H13 | 3459 | C3 | 9295 | K10 | | |
| 2312 | I13 | 3460 | D3 | 9297 | K10 | | |
| 2313 | H13 | 3467 | C11 | 9298 | K13 | | |
| 2314 | H14 | 3252 | H8 | 9299 | J12 | | |
| 2315 | I15 | 5253 | H9 | 9300 | J13 | | |
| 2316 | J16 | 5254 | G8 | 9301 | J10 | | |
| 2317 | K16 | 5255 | D20 | 9302 | J10 | | |
| 2318 | L16 | 5400 | D11 | 9303 | I3 | | |
| 2319 | M15 | 5401 | C9 | 9304 | K11 | | |
| 2322 | K15 | 5402 | D8 | 9305 | L18 | | |
| 2325 | M16 | 5403 | E8 | 9306 | H3 | | |
| 2326 | J11 | 5404 | E10 | 9337 | K7 | | |
| 2327 | H16 | 5405 | D7 | 9380 | H12 | | |
| 2328 | M15 | 5252 | I7 | 9383 | H11 | | |
| 2330 | J16 | 6253 | I7 | 9387 | J12 | | |
| 2334 | M8 | 6257 | M3 | 9388 | I3 | | |
| 2335 | M8 | 6259 | L4 | 9389 | I5 | | |
| 2337 | L4 | 6261 | L7 | 9390 | I5 | | |
| 2338 | M12 | 6263 | L8 | 9391 | M4 | | |
| 2339 | M5 | 6265 | L8 | 9393 | L6 | | |
| 2340 | J9 | 6267 | L9 | 9394 | L7 | | |
| 2341 | J8 | 6268 | H5 | 9396 | G7 | | |
| 2342 | G8 | 6269 | I4 | 9397 | H7 | | |
| 2343 | G9 | 6270 | H7 | 9399 | G8 | | |
| 2344 | G9 | 6271 | H6 | 9401 | E3 | | |
| 2345 | G9 | 6272 | H6 | 9402 | F12 | | |
| 2350 | H2 | 6274 | G4 | 9403 | F18 | | |
| 2360 | E19 | 6275 | G4 | 9404 | E15 | | |
| 2406 | D17 | 6276 | H15 | 9405 | D14 | | |
| 2413 | D7 | 6277 | H15 | 9410 | D7 | | |
| 2415 | E7 | 6278 | H14 | 9411 | D6 | | |
| 2417 | E6 | 6279 | H15 | 9419 | D17 | | |
| 2422 | D6 | 6280 | H14 | 9420 | C18 | | |
| 2424 | C7 | 6281 | H14 | 9421 | C12 | | |
| 2428 | C6 | 6283 | G12 | 9422 | C9 | | |
| 2430 | C5 | 6284 | I14 | 9425 | C9 | | |
| 2436 | D5 | 6290 | G7 | 9424 | B13 | | |
| 2439 | C5 | 6291 | G7 | 9439 | D9 | | |
| 2440 | E7 | 6292 | H4 | 9436 | C16 | | |
| 2441 | E6 | 6293 | H4 | 9437 | D7 | | |
| 2442 | B5 | 6294 | G4 | 9439 | D17 | | |
| 2443 | E6 | 6295 | G4 | 9442 | D18 | | |
| 2446 | D15 | 6297 | L5 | 9443 | D15 | | |
| 2500 | E10 | 6303 | M5 | 9445 | C15 | | |
| 2503 | D10 | 6304 | M12 | 9446 | B14 | | |

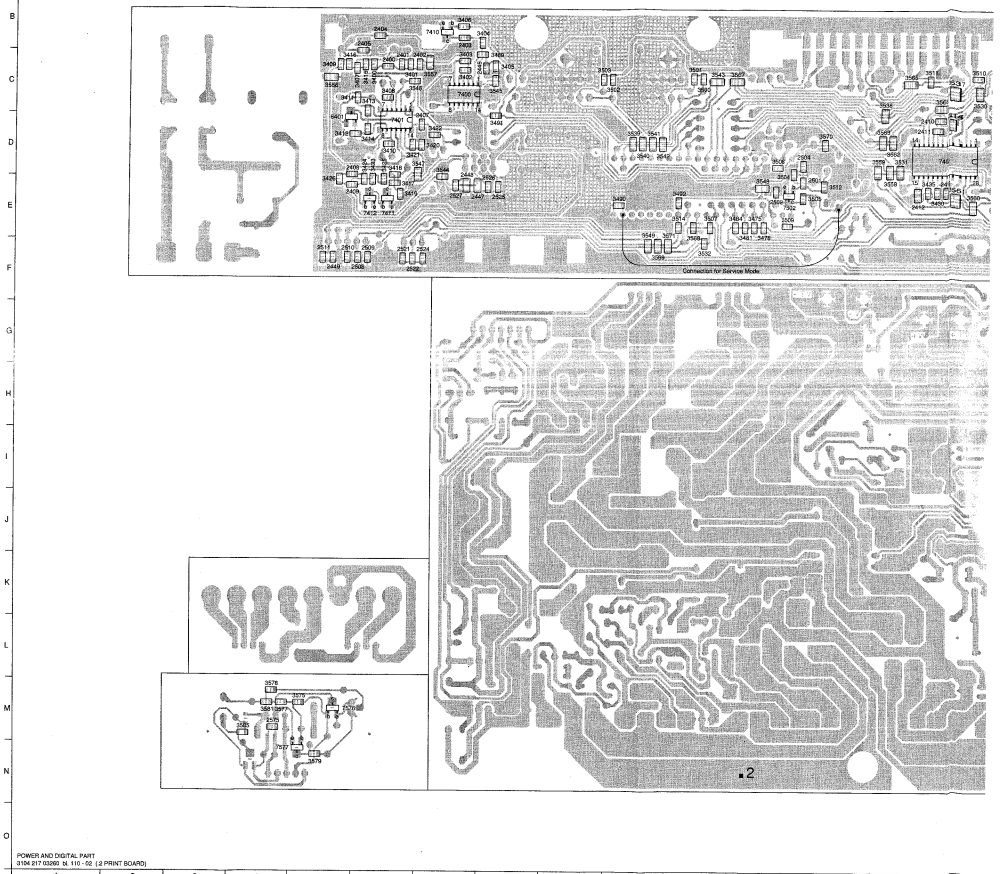
## POWER AND DIGITAL CHIPS COMPONENT LAYOUT

### .2 PCB VERSION



## POWER AND DIGITAL PART LAY-OUT

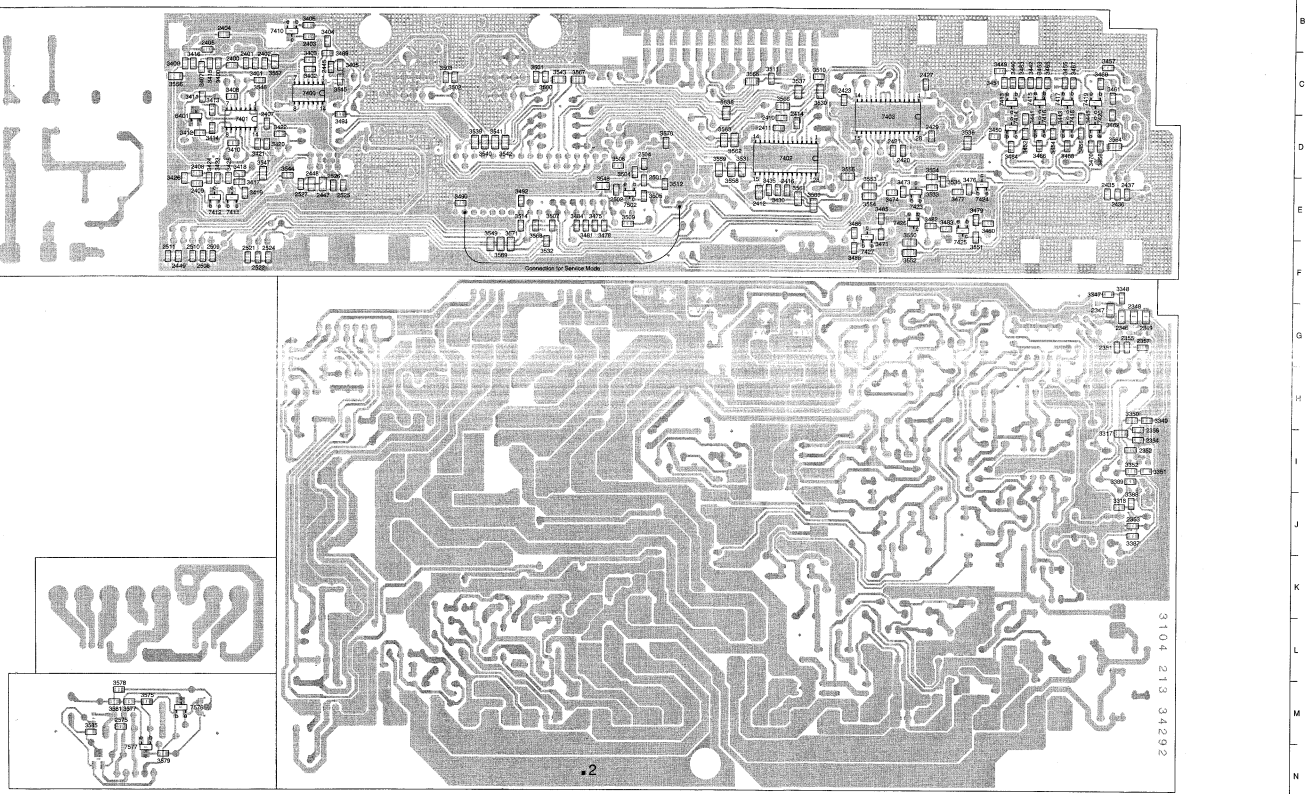
8204 090




POWER AND DIGITAL PART
3104 217 03293 (4 110 - 02 (.2 PRINT BOARD)

AL PART LAY-OUT

8204 090 54012

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| 2348 | G20 | 3479 | E18 | |
| 2349 | G21 | 3480 | E18 | |
| 2351 | G20 | 3481 | E12 | |
| 2352 | I21 | 3482 | E17 | |
| 2353 | J20 | 3483 | E17 | |
| 2354 | I21 | 3484 | E11 | |
| 2355 | G20 | 3485 | E16 | |
| 2356 | I21 | 3486 | E16 | |
| 2357 | G20 | 3488 | F18 | |
| 2400 | C6 | 3489 | C8 | |
| 2401 | C6 | 3490 | E10 | |
| 2402 | C6 | 3491 | D9 | |
| 2403 | B7 | 3492 | E11 | |
| 2404 | B6 | 3500 | C11 | |
| 2405 | B6 | 3501 | C11 | |
| 2407 | D6 | 3502 | C9 | |
| 2408 | D5 | 3503 | C9 | |
| 2409 | E5 | 3504 | E12 | |
| 2410 | D14 | 3505 | E13 | |
| 2411 | D14 | 3506 | D12 | |
| 2412 | E14 | 3507 | E11 | |
| 2414 | D15 | 3509 | E12 | |
| 2416 | E15 | 3510 | C15 | |
| 2420 | D17 | 3511 | C15 | |
| 2421 | D17 | 3512 | E13 | |
| 2423 | C16 | 3514 | E11 | |
| 2427 | C17 | 3530 | C15 | |
| 2429 | D17 | 3531 | D14 | |
| 2435 | E20 | 3532 | F11 | |
| 2436 | E20 | 3533 | E17 | |
| 2437 | E20 | 3534 | D17 | |
| 2445 | C7 | 3535 | E17 | |
| 2447 | E7 | 3536 | D18 | |
| 2448 | E7 | 3537 | C15 | |
| 2449 | F9 | 3538 | C14 | |
| 2501 | E13 | 3539 | D10 | |
| 2503 | E12 | 3540 | D10 | |
| 2504 | D13 | 3541 | D10 | |
| 2506 | F9 | 3542 | D10 | |
| 2509 | F8 | 3543 | C11 | |
| 2510 | F5 | 3544 | D7 | |
| 2511 | F5 | 3545 | C8 | |
| 2521 | F6 | 3546 | C6 | |
| 2522 | F6 | 3547 | D6 | |
| 2524 | F6 | 3548 | E12 | |
| 2525 | E8 | 3549 | E10 | |
| 2526 | E8 | 3550 | E17 | |
| 2527 | E7 | 3551 | F18 | |
| 2575 | M4 | 3552 | F17 | |
| 3317 | I20 | 3553 | E16 | |
| 3318 | J20 | 3554 | E16 | |
| 3347 | F20 | 3555 | D16 | |
| 3348 | F20 | 3556 | C6 | |
| 3349 | H21 | 3557 | C7 | |
| 3350 | H20 | 3558 | E14 | |
| 3351 | I21 | 3559 | D14 | |
| 3352 | I20 | 3560 | E15 | |
| 3387 | J20 | 3561 | E15 | |
| 3388 | J20 | 3562 | D14 | |
| 3389 | I20 | 3563 | D14 | |
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| 3401 | C6 | 3565 | C14 | |
| 3402 | C7 | 3566 | C15 | |
| 3403 | C7 | 3567 | C11 | |
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| 3408 | C6 | 3575 | M5 | |
| 3409 | C5 | 3577 | M4 | |
| 3410 | D6 | 3578 | M4 | |
| 3411 | C5 | 3579 | N5 | |
| 3412 | D5 | 3581 | M4 | |
| 3413 | C6 | 3585 | M4 | |
| 3414 | D6 | 6401 | D5 | |
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| 3416 | C5 | 7401 | D6 | |
| 3417 | E6 | 7402 | D16 | |
| 3418 | D6 | 7403 | D16 | |
| 3419 | E6 | 7410 | B7 | |
| 3420 | D7 | 7411 | E6 | |
| 3421 | C6 | 7412 | B6 | |
| 3422 | D7 | 7413 | C18 | |
| 3423 | D6 | 7414 | D19 | |
| 3424 | D6 | 7415 | C19 | |
| 3425 | D6 | 7416 | D19 | |
| 3426 | E5 | 7417 | C19 | |
| 3430 | E15 | 7418 | D19 | |
| 3435 | E15 | 7419 | C20 | |
| 3440 | C19 | 7420 | D20 | |
| 3441 | D19 | 7425 | E17 | |
| 3442 | C19 | 7424 | E18 | |
| 3443 | D19 | 7426 | F18 | |
| 3445 | D20 | 7428 | E17 | |
| 3446 | C18 | 7427 | F16 | |
| 3450 | D18 | 7502 | E12 | |
| 3451 | C18 | 7576 | M5 | |
| 3452 | D19 | 7577 | N4 | |
| 3453 | C19 | | | |
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| 3462 | D20 | | | |
| 3463 | C19 | | | |
| 3464 | D18 | | | |
| 3465 | D19 | | | |
| 3466 | D19 | | | |
| 3467 | C19 | | | |
| 3468 | D19 | | | |
| 3469 | C20 | | | |
| 3470 | D20 | | | |
| 3471 | F16 | | | |
| 3473 | E17 | | | |
| 3474 | E16 | | | |
| 3475 | E12 | | | |
| 3476 | E18 | | | |

**POWER AND DIGITAL COMBI COMPONENT LAYOUT**

**.2 PCB VERSION**

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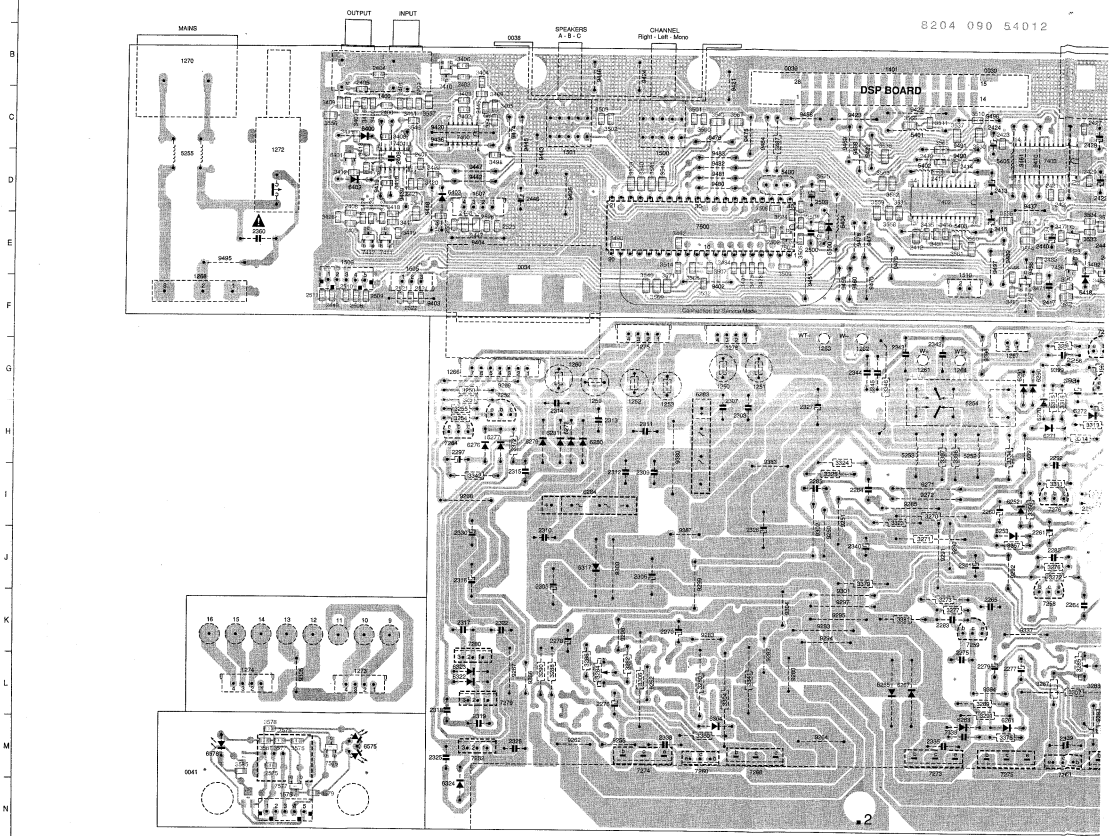
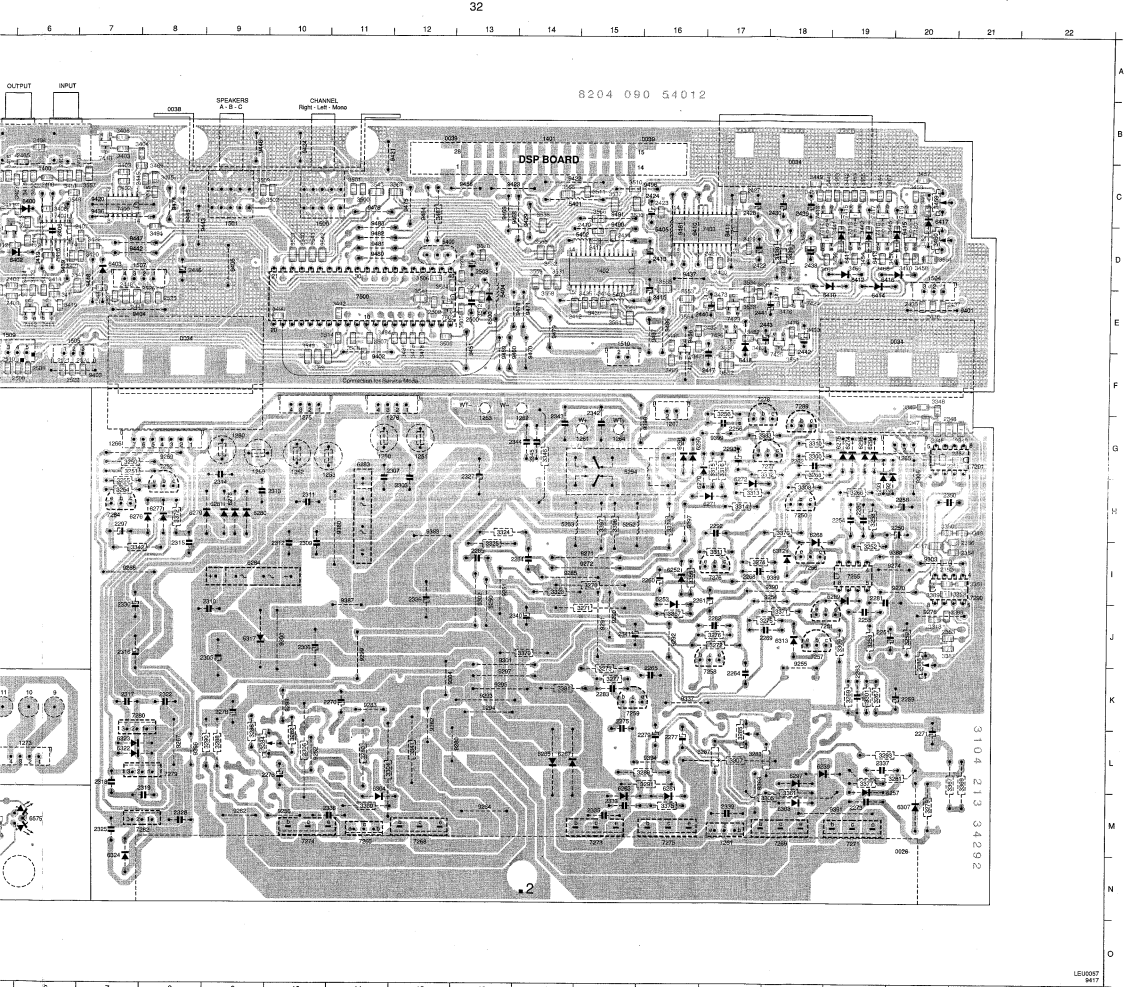
**POWER AND DIGITAL PART LAY-OUT**



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| | 0034 | E8 | 2407 | D6 | 3370 | H16 | 3545 | C6 | 7285 | F18 | 9489 | E16 | | | |
| | 0034 | C18 | 2408 | D6 | 3371 | J18 | 3546 | C6 | 7290 | I21 | 9490 | D15 | | | |
| | 0034 | E19 | 2409 | E5 | 3372 | H8 | 3547 | D6 | 7291 | G21 | 9491 | C15 | | | |
| A | 0038 | B8 | 2410 | D14 | 3375 | M16 | 3548 | E12 | 7400 | C7 | 9495 | E8 | | | |
| | 0039 | B12 | 2411 | D15 | 3377 | L19 | 3549 | E10 | 7401 | C8 | 9496 | C16 | | | |
| | 0039 | B15 | 2412 | E14 | 3379 | J14 | 3550 | E17 | 7402 | D15 | 9497 | E16 | | | |
| | 0041 | M5 | 2413 | D16 | 3381 | K14 | 3551 | F18 | 7403 | D16 | | | | | |
| | 1250 | G11 | 2414 | D15 | 3383 | G17 | 3552 | F17 | 7410 | B7 | | | | | |
| | 1251 | G12 | 2415 | E16 | 3386 | K20 | 3553 | E6 | 7411 | E6 | | | | | |
| | 1252 | G10 | 2416 | E16 | 3387 | J20 | 3554 | E16 | 7412 | E6 | | | | | |
| | 1253 | H10 | 2417 | F16 | 3388 | J20 | 3555 | D16 | 7413 | C18 | | | | | |
| B | 1259 | G9 | 2420 | D17 | 3389 | I20 | 3556 | C5 | 7414 | D18 | | | | | |
| | 1260 | G9 | 2421 | D17 | 3396 | H15 | 3557 | C7 | 7415 | C19 | | | | | |
| | 1261 | G14 | 2422 | D17 | 3397 | H15 | 3558 | E14 | 7416 | D19 | | | | | |
| | 1262 | G14 | 2423 | C16 | 3400 | C8 | 3559 | D14 | 7417 | C19 | | | | | |
| | 1263 | G13 | 2424 | C16 | 3401 | C8 | 3560 | E15 | 7418 | D19 | | | | | |
| | 1264 | G15 | 2427 | C17 | 3402 | C7 | 3561 | E15 | 7419 | C20 | | | | | |
| | 1265 | G20 | 2428 | C17 | 3403 | C7 | 3562 | C20 | 7420 | D20 | | | | | |
| | 1266 | G7 | 2429 | D17 | 3404 | B7 | 3563 | D14 | 7423 | E17 | | | | | |
| C | 1267 | G16 | 2430 | C19 | 3405 | C8 | 3564 | C20 | 7424 | E18 | | | | | |
| | 1268 | F3 | 2435 | E20 | 3406 | B7 | 3565 | D14 | 7425 | F18 | | | | | |
| | 1270 | B3 | 2436 | E20 | 3407 | C6 | 3566 | C15 | 7426 | E17 | | | | | |
| | 1272 | D4 | 2437 | E20 | 3408 | C6 | 3567 | C11 | 7427 | F16 | | | | | |
| | 1273 | L6 | 2438 | D18 | 3409 | C5 | 3568 | F11 | 7500 | E11 | | | | | |
| | 1274 | L4 | 2439 | C18 | 3410 | D6 | 3569 | F10 | 7502 | E12 | | | | | |
| | 1275 | G10 | 2440 | E16 | 3411 | C5 | 3570 | D13 | 7575 | M4 | | | | | |
| | 1276 | G11 | 2441 | E17 | 3412 | D5 | 3571 | E10 | 7576 | M5 | | | | | |
| D | 1400 | C6 | 2442 | F18 | 3413 | D6 | 3575 | M5 | 7577 | N4 | | | | | |
| | 1401 | B14 | 2443 | E17 | 3414 | D6 | 3577 | M4 | 9250 | J13 | | | | | |
| | 1500 | D10 | 2445 | C7 | 3415 | C6 | 3578 | M4 | 9251 | I13 | | | | | |
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| | 1504 | D20 | 2447 | E7 | 3417 | E8 | 3581 | M4 | 9254 | I18 | | | | | |
| | 1505 | E6 | 2448 | E7 | 3418 | D6 | 3585 | M4 | 9255 | J18 | | | | | |
| | 1507 | D7 | 2449 | F5 | 3419 | E8 | 5252 | H15 | 9256 | M10 | | | | | |
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| E | 1575 | N4 | 2502 | C12 | 3422 | D7 | 5255 | D9 | 9266 | L8 | | | | | |
| | 2250 | H20 | 2503 | D13 | 3423 | D6 | 5400 | D12 | 9267 | L8 | | | | | |
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| | 2254 | H19 | 2505 | F5 | 3425 | D6 | 5402 | D14 | 9269 | G8 | | | | | |
| | 2255 | J19 | 2509 | F6 | 3426 | E5 | 5403 | E15 | 9270 | I20 | | | | | |
| | 2256 | G17 | 2510 | F5 | 3430 | E15 | 5404 | E13 | 9271 | I15 | | | | | |
| | 2258 | H20 | 3511 | F5 | 3435 | E15 | 5405 | D18 | 9272 | I15 | | | | | |
| F | 2259 | K20 | 2521 | F6 | 3438 | D18 | 6252 | I16 | 9274 | I19 | | | | | |
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| | 2261 | J16 | 3524 | F6 | 3440 | C19 | 6257 | M19 | 9280 | L13 | | | | | |
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| | 2275 | K19 | 3255 | H7 | 3454 | D19 | 6272 | H17 | 9299 | K19 | | | | | |
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| | 2279 | L16 | 3261 | H19 | 3458 | D20 | 6277 | H8 | 9301 | J13 | | | | | |
| | 2280 | H19 | 3267 | K19 | 3459 | C20 | 6278 | H8 | 9302 | J13 | | | | | |
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| | 2282 | J17 | 3269 | K19 | 3461 | C20 | 6280 | H9 | 9304 | K13 | | | | | |
| | 2283 | K15 | 3270 | I15 | 3462 | D20 | 6281 | H9 | 9305 | L5 | | | | | |
| | 2284 | I13 | 3271 | J15 | 3463 | C19 | 6283 | G11 | 9306 | H20 | | | | | |
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| | 2297 | H7 | 3275 | J17 | 3467 | C19 | 6292 | H20 | 9387 | J11 | | | | | |
| | 2303 | H12 | 3276 | J17 | 3468 | D19 | 6293 | H19 | 9388 | I20 | | | | | |
| | 2305 | J8 | 3277 | K15 | 3469 | C20 | 6294 | G19 | 9389 | I18 | | | | | |
| | 2306 | J10 | 3279 | M20 | 3470 | D20 | 6295 | H19 | 9390 | I18 | | | | | |
| | 2307 | G11 | 3280 | L11 | 3471 | F16 | 6297 | L18 | 9391 | M18 | | | | | |
| | 2309 | I10 | 3281 | L20 | 3473 | E17 | 6300 | M18 | 9393 | L17 | | | | | |
| | 2310 | J9 | 3282 | L10 | 3474 | E17 | 6304 | M11 | 9394 | L16 | | | | | |
| | 2311 | H10 | 3283 | L17 | 3475 | F12 | 6307 | M20 | 9396 | G16 | | | | | |
| | 2312 | I10 | 3284 | L10 | 3476 | E18 | 6312 | I18 | 9397 | H16 | | | | | |
| | 2313 | H10 | 3285 | L17 | 3477 | E18 | 6313 | J18 | 9399 | G17 | | | | | |
| | 2314 | H9 | 3286 | L9 | 3478 | F12 | 6317 | J18 | 9401 | E21 | | | | | |
| | 2315 | I8 | 3287 | L16 | 3479 | E18 | 6322 | L7 | 9402 | F11 | | | | | |
| | 2316 | J7 | 3288 | L9 | 3480 | E18 | 6323 | L7 | 9403 | F7 | | | | | |
| | 2317 | K7 | 3289 | L16 | 3481 | F12 | 6324 | N7 | 9404 | E7 | | | | | |
| | 2318 | L7 | 3290 | L8 | 3482 | E17 | 6400 | C6 | 9405 | D9 | | | | | |
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| K | 2322 | K9 | 3293 | L19 | 3484 | E11 | 6402 | C5 | 9411 | D17 | | | | | |
| | 2325 | M7 | 3300 | G18 | 3485 | E17 | 6403 | C7 | 9419 | D8 | | | | | |
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| | 2327 | H13 | 3304 | L12 | 3487 | C12 | 6411 | D19 | 9421 | C12 | | | | | |
| | 2328 | M8 | 3305 | M17 | 3488 | F16 | 6412 | D19 | 9422 | C14 | | | | | |
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| L | 2337 | L19 | 3309 | J19 | 3492 | E11 | 6416 | D19 | 9426 | C7 | | | | | |
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| | 2341 | J15 | 3313 | I17 | 3503 | C9 | 6575 | M6 | 9443 | D9 | | | | | |
| | 2342 | G15 | 3314 | H17 | 3504 | E12 | 6576 | M3 | 9445 | G8 | | | | | |
| | 2343 | G14 | 3315 | G17 | 3505 | E13 | 7250 | H18 | 9446 | B9 | | | | | |
| | 2344 | G13 | 3316 | G17 | 3506 | D12 | 7251 | J18 | 9447 | D7 | | | | | |
| M | 2345 | G14 | 3317 | G9 | 3507 | E11 | 7252 | G8 | 9448 | E7 | | | | | |
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| | 2356 | I21 | 3349 | H21 | 3535 | D17 | 7273 | M15 | 9474 | C8 | | | | | |
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| | 2360 | E4 | 3351 | I21 | 3537 | C15 | 7275 | M16 | 9476 | C11 | | | | | |
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| | 2401 | C6 | 3356 | I16 | 3539 | D10 | 7277 | G17 | 9479 | E14 | | | | | |
| | 2402 | C7 | 3357 | I16 | 3540 | D10 | 7278 | F12 | 9480 | D11 | | | | | |
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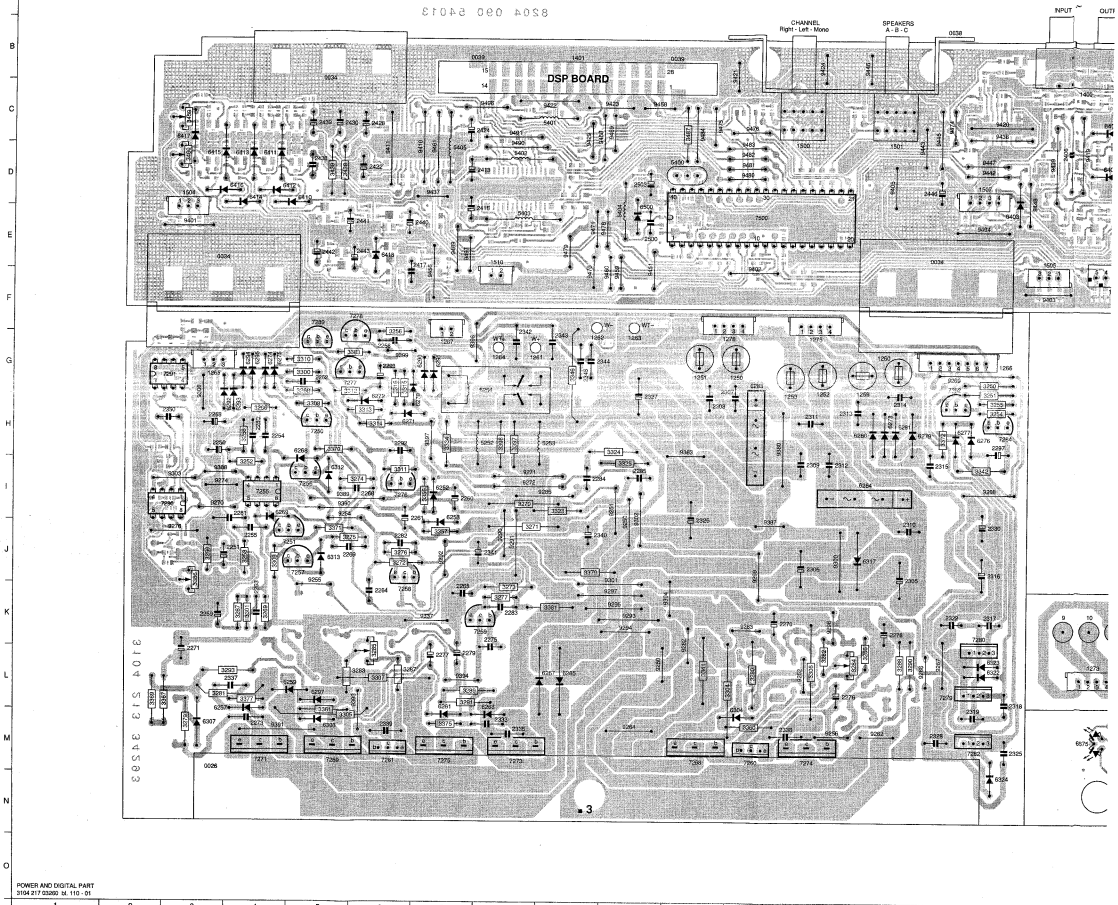
| | 2404 | B6 | 3361 | M18 | 3542 | D10 | 7280 | K7 | 9482 | D11 | | | | | |
| | 2405 | B6 | 3367 | L21 | 3543 | C11 | 7282 | M7 | 9483 | D11 | | | | | |

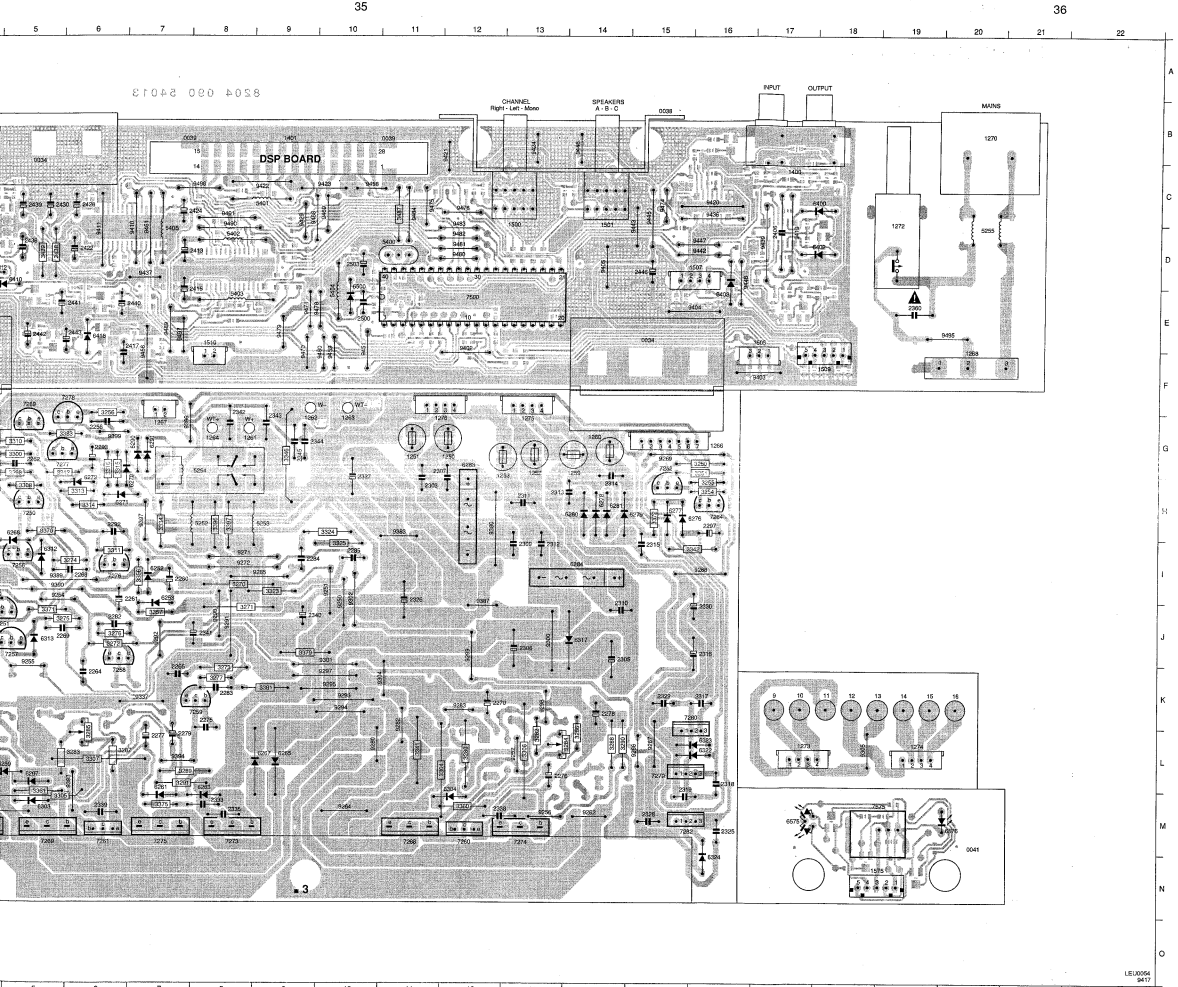
**POWER AND DIGITAL COMPONENT LAYOUT**

**.3 PCB VERSION**

**POWER AND DIGITAL PART LAY-OUT**




POWER AND DIGITAL PART
3104 217 03260 bl. 110 - 01

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| | 0034 | E15 | 3252 | I4 | 6313 | J5 | 9451 | F10 |
| | 0034 | E9 | 3253 | J4 | 6317 | J14 | 9456 | F7 |
| A | 0038 | B15 | 3254 | H16 | 6322 | L16 | 9458 | C10 |
| | 0039 | B7 | 3255 | H16 | 6323 | L16 | 9459 | F10 |
| | 0039 | B11 | 3256 | G5 | 6324 | N16 | 9460 | F10 |
| | 0041 | M20 | 3258 | H4 | 6400 | C17 | 9461 | D7 |
| | 1250 | G12 | 3259 | J5 | 6402 | D17 | 9468 | C9 |
| | 1251 | G11 | 3266 | H4 | 6403 | E16 | 9469 | C10 |
| B | 1252 | G13 | 3267 | K4 | 6410 | D5 | 9470 | F9 |
| | 1253 | H12 | 3268 | G5 | 6411 | D4 | 9471 | E9 |
| | 1259 | G14 | 3269 | K4 | 6412 | D4 | 9474 | C15 |
| | 1260 | G14 | 3270 | I5 | 6413 | D4 | 9475 | C11 |
| | 1261 | G8 | 3271 | J5 | 6414 | D4 | 9476 | C12 |
| | 1262 | G9 | 3272 | J6 | 6415 | D3 | 9478 | E10 |
| | 1263 | G10 | 3273 | K5 | 6416 | D4 | 9479 | E9 |
| | 1264 | G8 | 3274 | I6 | 6417 | C3 | 9480 | D12 |
| | 1265 | G3 | 3275 | J5 | 6418 | D6 | 9481 | D12 |
| C | 1266 | G16 | 3276 | J5 | 6500 | E10 | 9482 | D12 |
| | 1267 | G7 | 3277 | K5 | 6575 | M17 | 9483 | D12 |
| | 1268 | F20 | 3279 | M3 | 6576 | M20 | 9484 | C11 |
| | 1270 | B20 | 3280 | L12 | 7250 | H5 | 9489 | E7 |
| | 1272 | D19 | 3281 | L3 | 7251 | J4 | 9490 | D6 |
| | 1273 | L17 | 3282 | L13 | 7252 | G15 | 9491 | C8 |
| | 1274 | L19 | 3283 | L6 | 7255 | I4 | 9495 | E19 |
| D | 1275 | G13 | 3284 | L14 | 7256 | I5 | 9496 | C8 |
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| | 1504 | D9 | 3290 | L14 | 7266 | M11 | | |
| E | 1505 | E16 | 3291 | L7 | 7269 | M5 | | |
| | 1507 | D15 | 3293 | L3 | 7271 | M4 | | |
| | 1509 | F18 | 3300 | G5 | 7273 | M8 | | |
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| | 2254 | H4 | 3307 | L6 | 7278 | F5 | | |
| | 2255 | J4 | 3308 | H5 | 7279 | L15 | | |
| F | 2256 | G6 | 3309 | J4 | 7280 | K15 | | |
| | 2258 | H3 | 3310 | G5 | 7282 | M16 | | |
| | 2259 | K3 | 3311 | I5 | 7284 | H16 | | |
| | 2260 | I7 | 3312 | G5 | 7289 | F5 | | |
| | 2261 | J6 | 3313 | H6 | 7290 | I2 | | |
| | 2262 | G6 | 3314 | H6 | 7291 | G2 | | |
| | 2263 | K4 | 3315 | G6 | 7500 | E12 | | |
| | 2264 | K6 | 3316 | G5 | 7575 | M18 | | |
| | 2265 | K7 | 3323 | I3 | 9250 | J10 | | |
| | 2266 | I6 | 3324 | H15 | 9251 | I10 | | |
| | 2259 | J5 | 3325 | I10 | 9252 | L13 | | |
| G | 2270 | K12 | 3334 | H7 | 9254 | I5 | | |
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| | 2273 | M4 | 3342 | I15 | 9256 | M13 | | |
| | 2275 | K8 | 3346 | G4 | 9262 | M14 | | |
| | 2276 | L13 | 3356 | I7 | 9264 | M10 | | |
| | 2277 | L7 | 3357 | J7 | 9266 | L15 | | |
| H | 2278 | K14 | 3360 | M15 | 9267 | L16 | | |
| | 2279 | L7 | 3361 | M5 | 9268 | I16 | | |
| | 2280 | H4 | 3367 | L3 | 9269 | G15 | | |
| | 2281 | I4 | 3369 | L2 | 9270 | I3 | | |
| | 2282 | J6 | 3370 | H5 | 9271 | I8 | | |
| | 2283 | K8 | 3371 | J5 | 9272 | I8 | | |
| | 2284 | I8 | 3372 | H15 | 9274 | I3 | | |
| | 2285 | I10 | 3375 | M7 | 9276 | J3 | | |
| | 2292 | H5 | 3377 | L4 | 9280 | L10 | | |
| | 2293 | G6 | 3379 | J9 | 9282 | L11 | | |
| I | 2297 | H16 | 3381 | K9 | 9283 | K12 | | |
| | 2303 | H11 | 3383 | G5 | 9285 | I9 | | |
| | 2305 | J14 | 3386 | K3 | 9290 | J8 | | |
| | 2306 | J13 | 3396 | H8 | 9291 | J6 | | |
| | 2307 | G11 | 3397 | H8 | 9292 | J7 | | |
| | 2309 | I13 | 3438 | D5 | 9293 | K10 | | |
| | 2310 | J14 | 3439 | D5 | 9294 | K10 | | |
| J | 2311 | H13 | 3459 | C3 | 9295 | K10 | | |
| | 2312 | I13 | 3460 | D3 | 9297 | K10 | | |
| | 2313 | H13 | 3467 | C11 | 9298 | K13 | | |
| | 2314 | H14 | 3252 | H8 | 9299 | J12 | | |
| | 2315 | I15 | 5253 | H9 | 9300 | J13 | | |
| | 2316 | J16 | 5254 | G8 | 9301 | J10 | | |
| K | 2317 | K16 | 5255 | D20 | 9302 | J10 | | |
| | 2318 | L16 | 5400 | D11 | 9303 | I3 | | |
| | 2319 | M15 | 5401 | C9 | 9304 | K11 | | |
| | 2322 | K15 | 5402 | D8 | 9305 | L18 | | |
| | 2325 | M16 | 5403 | E8 | 9306 | H3 | | |
| | 2326 | J11 | 5404 | E10 | 9337 | K7 | | |
| | 2327 | H10 | 5405 | D7 | 9380 | H12 | | |
| | 2328 | M15 | 6262 | I7 | 9383 | H11 | | |
| | 2330 | J16 | 6263 | I7 | 9387 | J12 | | |
| | 2333 | M8 | 6257 | M3 | 9388 | I3 | | |
| | 2335 | M8 | 6259 | L4 | 9389 | I5 | | |
| L | 2337 | L4 | 6261 | L7 | 9390 | I5 | | |
| | 2338 | M12 | 6263 | L8 | 9391 | M4 | | |
| | 2339 | M9 | 6265 | L9 | 9393 | L6 | | |
| | 2340 | J9 | 6267 | L9 | 9394 | L7 | | |
| | 2341 | J6 | 6268 | H5 | 9396 | G7 | | |
| | 2342 | G8 | 6269 | I4 | 9397 | H7 | | |
| | 2343 | G9 | 6270 | H7 | 9399 | G6 | | |
| | 2344 | G9 | 6271 | H6 | 9401 | E3 | | |
| M | 2345 | G9 | 6272 | H8 | 9402 | F12 | | |
| | 2350 | H2 | 6274 | G4 | 9403 | F16 | | |
| | 2360 | E19 | 6275 | G4 | 9404 | E15 | | |
| | 2406 | D17 | 6276 | H15 | 9405 | D14 | | |
| | 2413 | D7 | 6277 | H15 | 9410 | D7 | | |
| | 2415 | E7 | 6278 | H14 | 9411 | D6 | | |
| | 2417 | E8 | 6279 | H15 | 9419 | D17 | | |
| N | 2422 | D6 | 6280 | H14 | 9420 | C16 | | |
| | 2424 | C7 | 6281 | H14 | 9421 | C12 | | |
| | 2428 | C6 | 6283 | G12 | 9422 | C9 | | |
| | 2430 | C5 | 6284 | I14 | 9423 | C9 | | |
| | 2436 | D5 | 6290 | G7 | 9424 | B13 | | |
| | 2439 | C5 | 6291 | G7 | 9429 | D9 | | |
| O | 2440 | E7 | 6292 | H4 | 9436 | C16 | | |
| | 2441 | E8 | 6293 | H4 | 9437 | D7 | | |
| | 2442 | E5 | 6294 | G4 | 9439 | D17 | | |
| | 2443 | D5 | 6295 | G4 | 9442 | D16 | | |
| | 2446 | D15 | 6297 | L5 | 9443 | D15 | | |
| | 2500 | E16 | 6300 | M5 | 9445 | C15 | | |
| | 2503 | D15 | 6304 | M12 | 9446 | B14 | | |

**POWER AND DIGITAL CHIPS COMPONENT LAYOUT**

**.3 PCB VERSION**

## POWER AND DIGITAL PART LAY-OUT

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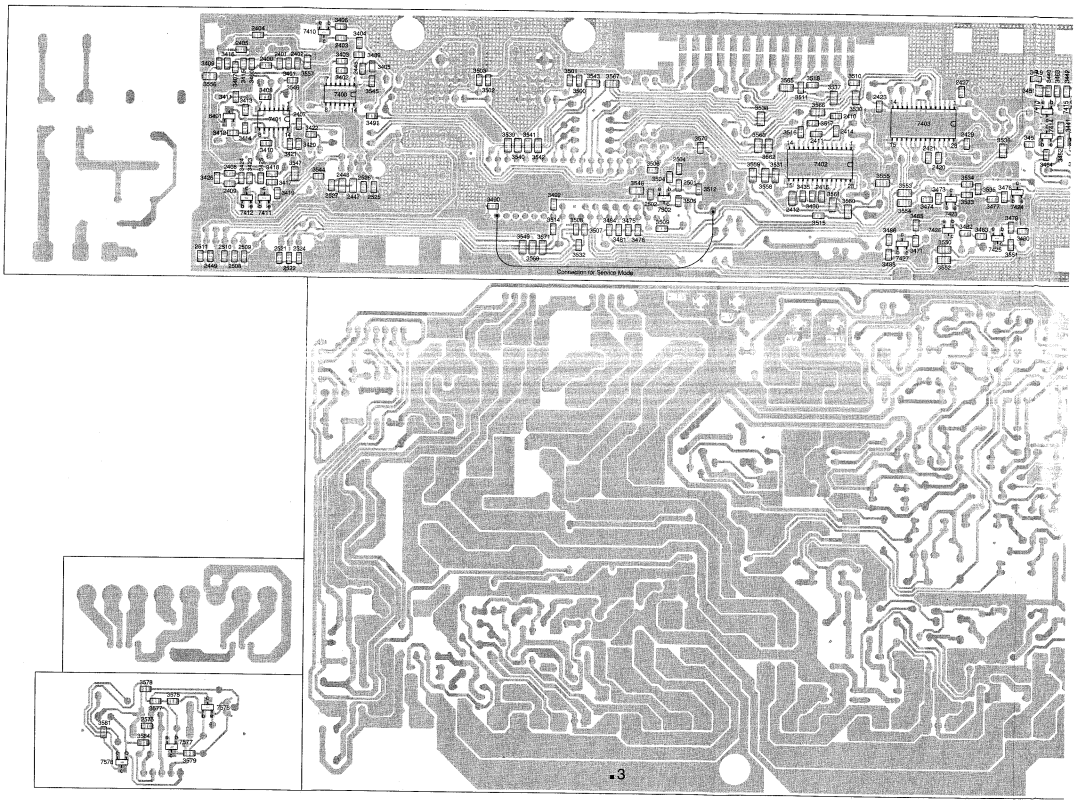
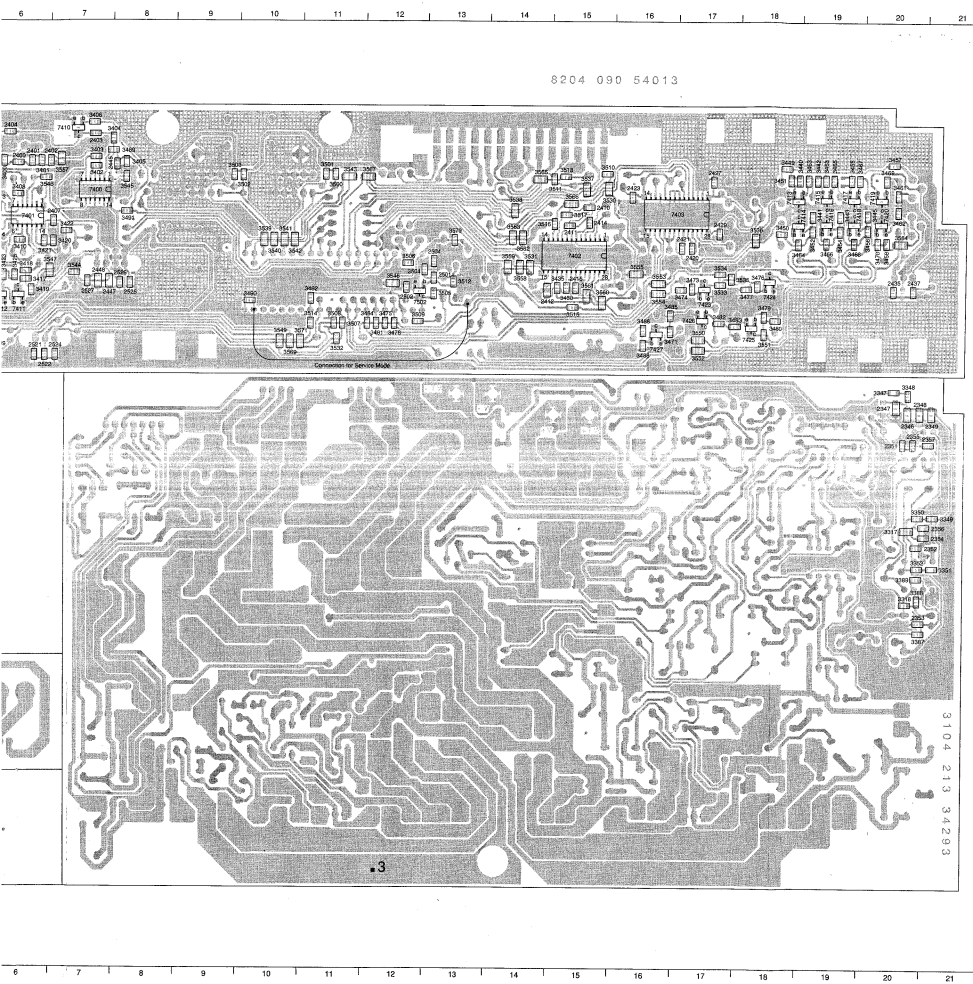



POWER AND DIGITAL PART
3104 217 03360 BL 110 - 02 (.3 PRINT BOARD)

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| 2352 | I21 | 3483 | E17 |
| 2353 | J20 | 3484 | E11 |
| 2354 | I21 | 3485 | E16 |
| 2355 | G20 | 3486 | E16 |
| 2356 | I21 | 3488 | F18 |
| 2357 | G20 | 3489 | C8 |
| 2400 | C6 | 3490 | E10 |
| 2401 | C6 | 3491 | D8 |
| 2402 | C6 | 3492 | E11 |
| 2403 | B7 | 3500 | C11 |
| 2404 | B6 | 3501 | C11 |
| 2405 | B6 | 3502 | C9 |
| 2407 | D6 | 3503 | C9 |
| 2408 | D5 | 3504 | E12 |
| 2409 | E8 | 3505 | E13 |
| 2410 | C15 | 3506 | D12 |
| 2411 | D15 | 3507 | E11 |
| 2412 | E14 | 3508 | E11 |
| 2414 | D15 | 3509 | E12 |
| 2416 | E15 | 3510 | C15 |
| 2420 | D17 | 3511 | C14 |
| 2421 | D17 | 3512 | E13 |
| 2423 | C16 | 3514 | E11 |
| 2427 | C17 | 3515 | E16 |
| 2429 | D17 | 3516 | D14 |
| 2436 | E20 | 3517 | D15 |
| 2437 | E20 | 3518 | C15 |
| 2446 | C7 | 3530 | C15 |
| 2447 | E7 | 3531 | D14 |
| 2448 | E7 | 3532 | F11 |
| 2449 | F5 | 3533 | E17 |
| 2501 | E13 | 3534 | D17 |
| 2502 | E12 | 3535 | E17 |
| 2504 | D13 | 3536 | D18 |
| 2506 | F5 | 3537 | C15 |
| 2509 | F6 | 3538 | C14 |
| 2510 | F5 | 3539 | D10 |
| 2511 | F5 | 3540 | D10 |
| 2521 | F6 | 3541 | D10 |
| 2522 | F6 | 3542 | D10 |
| 2524 | F6 | 3543 | C11 |
| 2525 | E8 | 3544 | D7 |
| 2526 | E8 | 3545 | C8 |
| 2527 | E7 | 3546 | C6 |
| 2575 | M4 | 3547 | D6 |
| 3217 | I20 | 3548 | E12 |
| 3318 | J20 | 3549 | E10 |
| 3347 | F20 | 3550 | B17 |
| 3348 | F20 | 3551 | F18 |
| 3349 | H21 | 3552 | F17 |
| 3350 | H22 | 3553 | E16 |
| 3351 | I21 | 3554 | E16 |
| 3352 | I20 | 3555 | D16 |
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| 3388 | J20 | 3557 | C7 |
| 3389 | I20 | 3558 | B14 |
| 3400 | C6 | 3559 | J14 |
| 3401 | C6 | 3560 | E15 |
| 3402 | C7 | 3561 | E15 |
| 3403 | C7 | 3562 | D14 |
| 3404 | B7 | 3563 | D14 |
| 3405 | C8 | 3564 | D20 |
| 3406 | B7 | 3565 | C14 |
| 3407 | C6 | 3566 | C15 |
| 3408 | C6 | 3567 | C11 |
| 3409 | C5 | 3569 | F10 |
| 3410 | D6 | 3570 | D13 |
| 3411 | C5 | 3571 | E10 |
| 3412 | D5 | 3575 | M5 |
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| 3414 | D6 | 3578 | M4 |
| 3415 | C6 | 3579 | N5 |
| 3416 | C5 | 3581 | M3 |
| 3417 | E6 | 3584 | M4 |
| 3418 | D6 | 6401 | D5 |
| 3419 | E6 | 7400 | C7 |
| 3420 | D7 | 7401 | D6 |
| 3421 | D6 | 7402 | D15 |
| 3422 | D7 | 7403 | D16 |
| 3423 | D6 | 7410 | B7 |
| 3424 | D6 | 7411 | E8 |
| 3425 | D6 | 7412 | E6 |
| 3426 | E6 | 7413 | C16 |
| 3430 | E15 | 7414 | D19 |
| 3435 | E15 | 7415 | C19 |
| 3440 | C19 | 7416 | D19 |
| 3441 | D19 | 7417 | C19 |
| 3442 | D19 | 7418 | D19 |
| 3443 | D19 | 7419 | C20 |
| 3446 | C20 | 7420 | D20 |
| 3449 | C18 | 7423 | E17 |
| 3450 | D18 | 7424 | E18 |
| 3451 | C18 | 7425 | F18 |
| 3452 | D19 | 7426 | E17 |
| 3453 | C19 | 7427 | F16 |
| 3454 | D19 | 7502 | E12 |
| 3455 | C19 | 7576 | M5 |
| 3456 | C20 | 7577 | N5 |
| 3457 | C20 | 7578 | N4 |
| 3458 | D20 | | |
| 3461 | C20 | | |
| 3462 | D20 | | |
| 3463 | C19 | | |
| 3464 | D18 | | |
| 3465 | C19 | | |
| 3466 | D19 | | |
| 3467 | C19 | | |
| 3468 | D19 | | |
| 3469 | C20 | | |
| 3470 | D20 | | |
| 3471 | F16 | | |
| 3473 | E17 | | |
| 3474 | E16 | | |
| 3475 | E12 | | |
| 3476 | E18 | | |
| 3477 | E18 | | |

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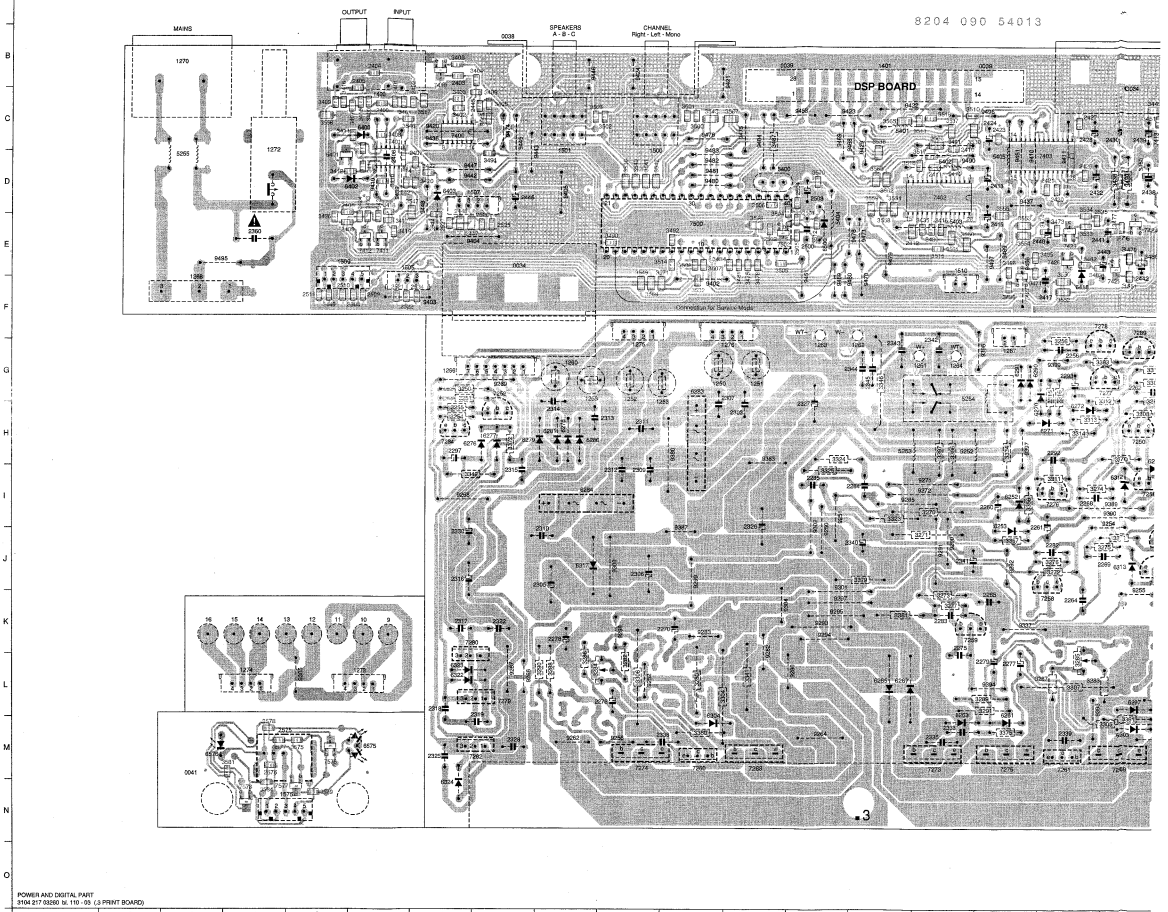
**POWER AND DIGITAL**
**COMBI COMPONENT LAYOUT**

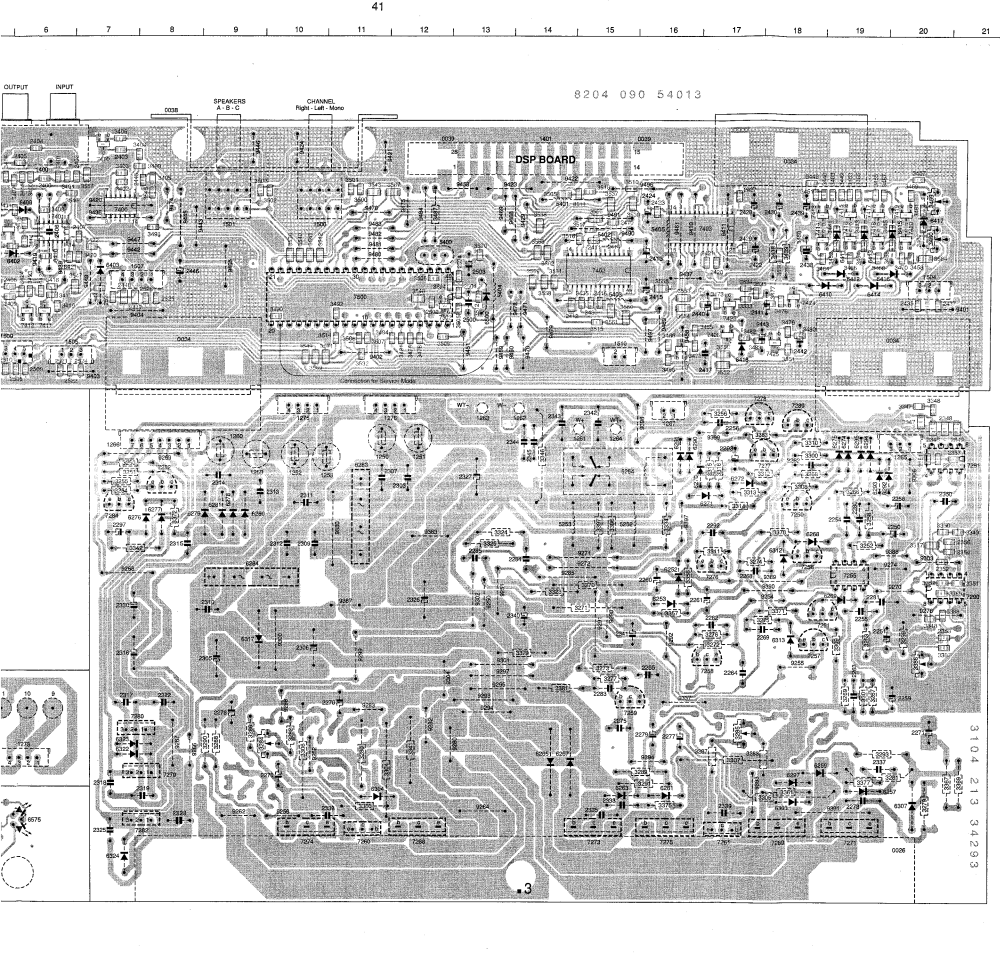
**.3 PCB VERSION**

40 41

## POWER AND DIGITAL PART LAY-OUT




POWER AND DIGITAL PART
3104 217 33260 lit. 110 -03 (.3 PRINT BOARD)

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| | 0034 | E8 | 2407 | D6 | 3371 | J18 | 3541 | D10 | 7280 | K7 | 9481 | D11 |
| | 0034 | C18 | 2408 | D5 | 3372 | H8 | 3542 | D18 | 7282 | M7 | 9482 | D11 |
| A | 0034 | E19 | 2409 | E5 | 3375 | M16 | 3543 | C11 | 7284 | H7 | 9483 | D11 |
| | 0038 | B8 | 2410 | C16 | 3377 | L19 | 3544 | E7 | 7286 | F18 | 9484 | C12 |
| | 0038 | B12 | 2411 | D15 | 3379 | J14 | 3545 | C8 | 7290 | I21 | 9489 | E16 |
| | 0039 | B15 | 2412 | E14 | 3381 | K14 | 3546 | C6 | 7291 | G21 | 9490 | D15 |
| | 0041 | M3 | 2413 | D16 | 3383 | G17 | 3547 | D6 | 7400 | C7 | 9491 | C15 |
| | 1250 | G11 | 2414 | D15 | 3386 | K20 | 3548 | E12 | 7401 | C6 | 9495 | E3 |
| | 1251 | G12 | 2415 | E16 | 3387 | J20 | 3549 | E10 | 7402 | D15 | 9496 | C16 |
| | 1252 | G10 | 2416 | E15 | 3388 | J20 | 3550 | E17 | 7403 | D16 | 9497 | E16 |
| | 1253 | H10 | 2417 | F16 | 3389 | I21 | 3551 | F18 | 7410 | B7 | | |
| B | 1259 | G9 | 2420 | D17 | 3396 | H15 | 3552 | F17 | 7411 | E8 | | |
| | 1260 | G9 | 2421 | D17 | 3397 | H15 | 3553 | E16 | 7412 | E9 | | |
| | 1261 | G14 | 2422 | D17 | 3400 | C6 | 3554 | E16 | 7413 | C18 | | |
| | 1262 | G14 | 2423 | C16 | 3401 | C6 | 3555 | D18 | 7414 | D18 | | |
| | 1263 | G13 | 2424 | C16 | 3402 | C7 | 3556 | C5 | 7415 | C19 | | |
| | 1264 | G15 | 2427 | C17 | 3403 | C7 | 3557 | C7 | 7416 | D19 | | |
| | 1265 | G20 | 2429 | C17 | 3404 | B7 | 3558 | E14 | 7417 | C19 | | |
| C | 1266 | G7 | 2429 | D17 | 3405 | C8 | 3559 | D14 | 7418 | D19 | | |
| | 1267 | G16 | 2430 | C18 | 3406 | B7 | 3560 | E15 | 7419 | C20 | | |
| | 1268 | F3 | 2435 | E20 | 3407 | C6 | 3561 | E15 | 7420 | D20 | | |
| | 1270 | B3 | 2437 | E20 | 3408 | C6 | 3562 | D14 | 7423 | E17 | | |
| | 1272 | D4 | 2438 | D18 | 3409 | C5 | 3563 | D14 | 7424 | E18 | | |
| | 1273 | L6 | 2439 | C18 | 3410 | C6 | 3564 | D20 | 7425 | F18 | | |
| | 1274 | L4 | 2440 | E18 | 3411 | C5 | 3565 | C14 | 7426 | E17 | | |
| | 1275 | G10 | 2441 | E17 | 3412 | C6 | 3566 | C15 | 7427 | F16 | | |
| D | 1276 | G11 | 2442 | F18 | 3413 | D6 | 3567 | C11 | 7500 | E11 | | |
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| | 1501 | B14 | 2445 | C7 | 3415 | C6 | 3570 | D13 | 7575 | M4 | | |
| | 1502 | D10 | 2446 | D8 | 3416 | C5 | 3571 | E10 | 7576 | M5 | | |
| | 1503 | D6 | 2447 | E7 | 3417 | B6 | 3575 | M5 | 7577 | N4 | | |
| | 1504 | D20 | 2448 | E7 | 3418 | D6 | 3577 | M4 | 7578 | N4 | | |
| | 1505 | E6 | 2449 | F5 | 3419 | E6 | 3578 | M4 | 9250 | J13 | | |
| | 1507 | D7 | 2500 | E13 | 3420 | D7 | 3579 | N5 | 9251 | I13 | | |
| E | 1509 | E5 | 2501 | E13 | 3421 | D6 | 3581 | M3 | 9252 | L10 | | |
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| | 1575 | N4 | 2503 | D13 | 3423 | D6 | 3252 | H15 | 9255 | J18 | | |
| | 2250 | H20 | 2504 | D13 | 3424 | D6 | 3253 | H14 | 9256 | M18 | | |
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| F | 2259 | K20 | 2522 | F6 | 3439 | D18 | 3403 | E15 | 9269 | G8 | | |
| | 2260 | I16 | 2524 | F6 | 3440 | C19 | 3404 | E13 | 9270 | I20 | | |
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| | 2262 | G19 | 2526 | E8 | 3442 | C19 | 6252 | I16 | 9272 | I15 | | |
| | 2263 | K19 | 2527 | E7 | 3443 | D19 | 6253 | I16 | 9274 | I18 | | |
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| | 2269 | J17 | 3252 | I19 | 3451 | C18 | 6263 | L15 | 9283 | K11 | | |
| | 2270 | K19 | 3253 | J19 | 3452 | D19 | 6265 | L14 | 9285 | I14 | | |
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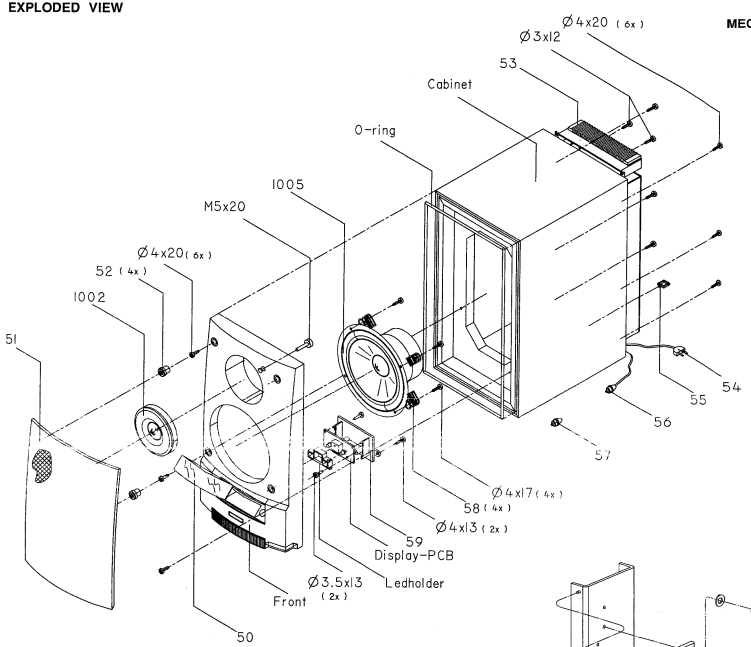
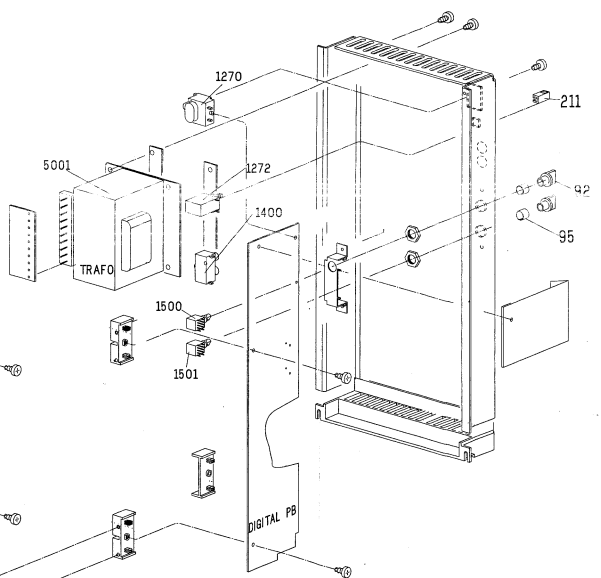
| | 2277 | L18 | 3259 | J20 | 3457 | C20 | 6271 | I17 | 9294 | K12 | | |
| | 2278 | K9 | 3266 | H19 | 3458 | D20 | 6272 | H17 | 9296 | K19 | | |
| | 2279 | L16 | 3267 | K19 | 3459 | C20 | 6274 | G19 | 9297 | K15 | | |
| | 2280 | H18 | 3268 | G19 | 3460 | D20 | 6275 | G20 | 9298 | K10 | | |
| | 2281 | I12 | 3269 | K19 | 3461 | C20 | 6276 | H7 | 9299 | J11 | | |
| | 2282 | J17 | 3270 | I15 | 3462 | D20 | 6277 | H8 | 9300 | J10 | | |
| | 2283 | K15 | 3271 | J15 | 3463 | D19 | 6278 | H9 | 9301 | J13 | | |
| | 2284 | I13 | 3272 | J17 | 3464 | D18 | 6279 | H8 | 9302 | J13 | | |
| | 2285 | I13 | 3273 | K15 | 3465 | C19 | 6280 | H9 | 9303 | I20 | | |
| | 2292 | H17 | 3274 | I17 | 3466 | D19 | 6281 | H9 | 9304 | K13 | | |
| | 2293 | G17 | 3275 | J17 | 3467 | C19 | 6283 | G11 | 9305 | L8 | | |
| | 2297 | H7 | 3276 | J17 | 3468 | D19 | 6284 | I9 | 9306 | H20 | | |
| | 2303 | H15 | 3277 | K15 | 3469 | C20 | 6290 | G16 | 9307 | K16 | | |
| | 2305 | J8 | 3279 | M20 | 3470 | D20 | 6291 | G16 | 9380 | H11 | | |
| | 2306 | J16 | 3280 | L11 | 3471 | F16 | 6292 | H20 | 9383 | H12 | | |
| | 2307 | G11 | 3281 | L20 | 3473 | E17 | 6293 | H19 | 9387 | J11 | | |
| | 2309 | I10 | 3282 | L10 | 3474 | E17 | 6294 | G18 | 9388 | I20 | | |
| | 2310 | J9 | 3283 | L17 | 3475 | F12 | 6295 | G19 | 9389 | I18 | | |
| | 2311 | H10 | 3284 | L10 | 3476 | E18 | 6297 | L5 | 9390 | I18 | | |
| J | 2312 | I10 | 3285 | L17 | 3477 | E18 | 6303 | M18 | 9391 | M19 | | |
| | 2313 | H10 | 3286 | L9 | 3478 | F12 | 6304 | M11 | 9393 | L17 | | |
| | 2314 | H9 | 3287 | L16 | 3479 | E18 | 6307 | M20 | 9394 | L16 | | |
| | 2315 | I8 | 3288 | L9 | 3480 | E18 | 6312 | I18 | 9396 | G18 | | |
| | 2316 | J7 | 3289 | L16 | 3481 | F12 | 6313 | J18 | 9397 | H16 | | |
| | 2317 | K7 | 3290 | L9 | 3482 | E17 | 6317 | J9 | 9399 | G17 | | |
| | 2318 | L7 | 3291 | L16 | 3483 | E17 | 6322 | L7 | 9401 | E21 | | |
| | 2319 | M7 | 3293 | L19 | 3484 | E11 | 6323 | L7 | 9402 | F11 | | |
| | 2322 | K8 | 3300 | G19 | 3485 | E17 | 6324 | M7 | 9403 | F7 | | |
| | 2325 | M7 | 3301 | K19 | 3486 | E16 | 6400 | C6 | 9404 | E7 | | |
| | 2326 | J12 | 3304 | L13 | 3487 | C12 | 6401 | D5 | 9405 | D9 | | |
| | 2327 | H13 | 3305 | M17 | 3488 | F16 | 6402 | D5 | 9410 | D16 | | |
| | 2328 | M8 | 3306 | L10 | 3489 | C8 | 6403 | D7 | 9411 | D17 | | |
| | 2330 | J7 | 3307 | L17 | 3490 | E10 | 6410 | E18 | 9419 | D6 | | |
| | 2333 | M15 | 3308 | H18 | 3491 | D8 | 6411 | D19 | 9420 | C7 | | |
| | 2335 | M15 | 3309 | J18 | 3492 | E11 | 6412 | D19 | 9421 | D12 | | |
| L | 2337 | L19 | 3310 | G18 | 3500 | C11 | 6413 | D19 | 9422 | C14 | | |
| | 2338 | M20 | 3311 | I17 | 3501 | C11 | 6414 | E19 | 9423 | C13 | | |
| | 2339 | M17 | 3312 | G17 | 3502 | C9 | 6415 | D20 | 9424 | B10 | | |
| | 2340 | J13 | 3313 | H17 | 3503 | C9 | 6416 | D19 | 9429 | D14 | | |
| | 2341 | J15 | 3314 | H17 | 3504 | E12 | 6417 | C20 | 9436 | C7 | | |
| | 2342 | G15 | 3315 | G17 | 3505 | E13 | 6418 | F17 | 9437 | D16 | | |
| | 2343 | G14 | 3316 | G17 | 3506 | D12 | 6500 | E13 | 9438 | D6 | | |
| | 2344 | G13 | 3317 | I23 | 3507 | E11 | 6575 | M6 | 9442 | D7 | | |
| | 2345 | G14 | 3318 | J20 | 3508 | E11 | 6576 | M5 | 9443 | D9 | | |
| M | 2346 | G20 | 3323 | I14 | 3509 | E12 | 7250 | H18 | 9445 | C8 | | |
| | 2347 | G20 | 3324 | H13 | 3510 | C15 | 7251 | J18 | 9446 | B8 | | |
| | 2348 | G20 | 3325 | I13 | 3511 | C14 | 7252 | G8 | 9447 | D7 | | |
| | 2349 | G21 | 3334 | H16 | 3512 | E13 | 7255 | I19 | 9448 | E7 | | |
| | 2350 | H20 | 3341 | L12 | 3514 | E10 | 7256 | I18 | 9451 | F13 | | |
| | 2351 | G20 | 3342 | I7 | 3515 | E15 | 7257 | J18 | 9456 | E16 | | |
| | 2352 | I20 | 3346 | G14 | 3516 | D14 | 7258 | K17 | 9457 | C13 | | |
| N | 2353 | J20 | 3347 | F20 | 3517 | D14 | 7259 | K15 | 9458 | F13 | | |
| | 2354 | I21 | 3348 | F20 | 3518 | C15 | 7260 | M11 | 9459 | F14 | | |
| | 2355 | G20 | 3349 | H21 | 3550 | C15 | 7261 | M17 | 9461 | D16 | | |
| | 2356 | I21 | 3350 | H20 | 3231 | D14 | 7268 | M12 | 9468 | D13 | | |
| | 2357 | G20 | 3351 | I21 | 3552 | F11 | 7269 | M18 | 9469 | C13 | | |
| | 2360 | E4 | 3352 | I20 | 3533 | E17 | 7271 | M19 | 9470 | F14 | | |
| | 2400 | C6 | 3356 | I16 | 3534 | D17 | 7273 | M15 | 9471 | E14 | | |
| | 2401 | C6 | 3357 | J16 | 3535 | D17 | 7274 | M10 | 9474 | C8 | | |
| | 2402 | C7 | 3360 | M11 | 3536 | D18 | 7275 | M16 | 9476 | C12 | | |
| | 2403 | B7 | 3361 | M18 | 3537 | C15 | 7276 | I17 | 9476 | C11 | | |
| | 2404 | B6 | 3367 | L21 | 3538 | C14 | 7277 | G17 | 9478 | E14 | | |
| O | 2405 | B5 | 3369 | L21 | 3539 | D10 | 7278 | F17 | 9479 | E14 | | |

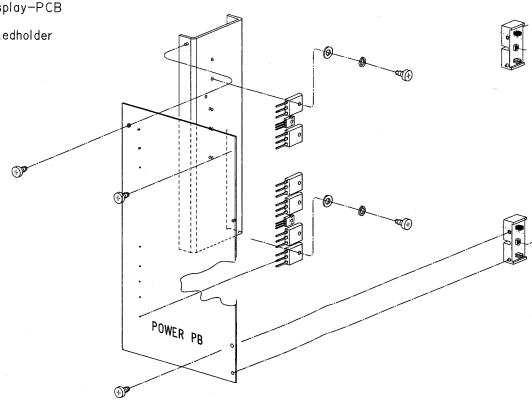
## EXPLODED VIEW




## MECHANICAL PARTS BACKSIDE

| | | |
|---|---|---|
| 92 | 4822 492 61974 | KNOB |
| 95 | 4822 410 60119 | SPRING |
| 211 | 4822 413 31586 | POWER BUTTON |
| 1270 | 4822 265 31015 | MAINS SOCKET |
| 1272 | 4822 276 13224 | POWER SWITCH |
| 1400 | 4822 267 41064 | CINCH SOCKET |
| 1500 | 4822 273 20367 | ROTARY SWITCH |
| 1501 | 4822 273 20367 | ROTARY SWITCH |
| 5001 | 4822 146 31364 | MAINS TRAFO |




## MECHANICAL PARTS

| | | |
|---|---|---|
| | 4822 218 10447 | REMOTE RH6860 |
| 50 | 4822 459 40752 | WINDOW |
| 51 | 4822 458 50502 | GRILLE |
| 52 | 4822 325 80223 | GROMMET |
| 53 | 4822 460 60593 | ORNAMENTAL PROFILE |
| 54 | 4822 321 10249 | MAINS CORD |
| 55 | 4822 401 11523 | CABLE CLAMP |
| 56 | 4822 321 61536 | CORDSET COAX 6 M |
| 57 | 4822 264 30327 | CINCH PLUG 75 Ω |
| 58 | 4822 403 70734 | MOUNT. BRACKET |
| 1002 | 4822 240 70265 | TWEET 00 11601/T8FF |
| 1005 | 4822 240 60345 | WOOF. AD 70623/W8 |

## MISCELLANEOUS

| | | |
|---|---|---|
| 41 | 4822 255 41332 | LED HOLDER |
| 1250 | 4822 071 52002▲ | FUSE 2A |
| 1251 | 4822 071 52002▲ | FUSE 2A |
| 1252 | 4822 071 52002▲ | FUSE 2A |
| 1253 | 4822 071 52002▲ | FUSE 2A |
| 1259 | 4822 071 55001▲ | FUSE 500MA |
| 1260 | 4822 071 55001▲ | FUSE 500MA |
| 1270 | 4822 265 31015 | MAINS SOCKET |
| 1272 | 4822 276 13224 | POWER SWITCH |
| 1400 | 4822 267 41064 | CINCH SOCKET |
| 1401 | 4822 214 52205 | DSP UNIT |
| 1500 | 4822 273 20367 | ROTARY SWITCH |
| 1501 | 4822 273 20367 | ROTARY SWITCH |

## CAPACITORS

| | | |
|---|---|---|
| 2250 | 4822 124 40242 | 1µF 20% 63V |
| 2251 | 4822 124 40244 | 2,2µF 20% 63V |
| 2254 | 4822 122 33195 | 100pF 10% 50V |
| 2255 | 4822 122 33195 | 100pF 10% 50V |
| 2256 | 4822 126 11714 | 4,7nF 20% |
| 2258 | 4822 124 40248 | 10µF 20% 63V |
| 2259 | 4822 124 40196 | 220µF 20% 16V |
| 2260 | 4822 124 41643 | 100µF 20% 16V |
| 2261 | 4822 124 41643 | 100µF 20% 16V |
| 2262 | 4822 122 33849 | 150pF 10%Y5P 50V |
| 2263 | 4822 122 33195 | 100pF 10% 50V |
| 2264 | 4822 126 11978 | 470pF 10%YB 500V |
| 2265 | 4822 122 33354 | 150pF 500V |
| 2268 | 4822 122 10466 | 220pF 10% 50V |
| 2269 | 4822 122 10466 | 220pF 10% 50V |
| 2270 | 4822 124 41596 | 22µF 20% 50V |
| 2271 | 4822 124 40771 | 47µF 20% 100V |
| 2273 | 4822 122 10466 | 220pF 10% 50V |
| 2275 | 4822 122 31199 | 22pF 2% 500V |
| 2276 | 4822 124 41584 | 100µF 20% 10V |
| 2277 | 4822 124 41584 | 100µF 20% 10V |
| 2278 | 4822 124 41596 | 22µF 20% 50V |
| 2279 | 4822 124 41596 | 22µF 20% 50V |
| 2280 | 4822 122 33195 | 100pF 10% 50V |
| 2281 | 4822 122 33195 | 100pF 10% 50V |
| 2282 | 4822 122 33197 | 1nF 10% 50V |
| 2283 | 4822 122 33197 | 1nF 10% 50V |
| 2284 | 4822 121 42007 | 100nF 10% 100V |
| 2285 | 4822 121 42007 | 100nF 10% 100V |
| 2292 | 4822 121 41854 | 150nF 5% 63V |
| 2293 | 5322 124 41431 | 22µF 20% 35V |
| 2297 | 4822 124 40248 | 10µF 20% 63V |
| 2303 | 4822 121 43875 | 47nF 5% 250V |
| 2305 | 4822 124 80563 | 4700µF 20% 35V |
| 2306 | 4822 124 80563 | 4700µF 20% 35V |
| 2307 | 4822 121 43875 | 47nF 5% 250V |
| 2309 | 4822 121 43875 | 47nF 5% 250V |
| 2310 | 4822 121 42007 | 100nF 10% 100V |
| 2311 | 4822 121 42007 | 100nF 10% 100V |
| 2312 | 4822 121 42007 | 100nF 10% 100V |
| 2313 | 4822 121 43526 | 47nF 5% 250V |
| 2314 | 4822 121 43526 | 47nF 5% 250V |
| 2315 | 4822 121 43526 | 47nF 5% 250V |
| 2316 | 4822 124 42057 | 3300µF 20% 25V |
| 2317 | 5322 121 42386 | 100nF 5% 63V |
| 2318 | 5322 121 42386 | 100nF 5% 63V |
| 2319 | 5322 121 42386 | 100nF 5% 63V |
| 2322 | 5322 121 42386 | 100nF 5% 63V |
| 2325 | 5322 121 42386 | 100nF 5% 63V |
| 2326 | 4822 124 80878 | 4700µF 20% 63V |
| 2327 | 4822 124 80878 | 4700µF 20% 63V |
| 2328 | 5322 121 42386 | 100nF 5% 63V |
| 2330 | 4822 124 22263 | 220µF 20% 25V |
| 2333 | 4822 122 33195 | 100pF 10% 50V |
| 2335 | 4822 122 33849 | 150pF 10%Y5P 50V |
| 2337 | 4822 122 10466 | 220pF 10% 50V |
| 2338 | 4822 122 33197 | 1nF 10% 50V |
| 2339 | 4822 122 33197 | 1nF 10% 50V |
| 2340 | 4822 124 40771 | 47µF 20% 100V |
| 2341 | 4822 124 40771 | 47µF 20% 100V |
| 2342 | 4822 122 10466 | 220pF 10% 50V |
| 2343 | 4822 122 10466 | 220pF 10% 50V |
| 2344 | 4822 122 10466 | 220pF 10% 50V |
| 2345 | 4822 122 10466 | 220pF 10% 50V |
| 2346 | 4822 126 12103 | 680nF 80%20 50V |
| 2347 | 4822 126 12103 | 680nF 80%20 50V |
| 2348 | 4822 126 12103 | 680nF 80%20 50V |
| 2349 | 4822 126 12103 | 680nF 80%20 50V |
| 2350 | 4822 121 43526 | 47nF 5% 250V |
| 2351 | 5322 122 32654 | 22nF 10% 63V |
| 2352 | 5322 122 32531 | 100pF 5% 50V |
| 2353 | 5322 122 32531 | 100pF 5% 50V |
| 2354 | 5322 122 32654 | 22nF 10% 63V |
| 2355 | 5322 122 32654 | 22nF 10% 63V |
| 2356 | 5322 122 32654 | 22nF 10% 63V |
| 2357 | 5322 122 32531 | 100pF 5% 50V |
| 2360 | 4822 126 12224 | 4,7nF 20% 125V |
| 2400 | 5322 122 31865 | 1,5nF 10% 63V |
| 2401 | 5322 122 31863 | 330pF 5% 50V |
| 2402 | 4822 122 33575 | 220pF 5%NPO 50V |
| 2403 | 5322 122 32654 | 22nF 10% 63V |
| 2404 | 4822 122 33342 | 33nF 10% 63V |
| 2405 | 4822 122 33575 | 220pF 5%NPO 50V |
| 2406 | 4822 126 12787 | 330pF 10% 50V |
| 2407 | 4822 122 33893 | 18nF 10% 63V |
| 2408 | 4822 122 33336 | 8,2nF 10% 50V |
| 2409 | 5322 122 31863 | 330pF 5% 50V |
| 2410 | 4822 122 33177 | 10nF 20% 50V |



| | | |
|---|---|---|
| 2411 | 4822 122 33177 | 10nF 20% 50V |
| 2412 | 4822 122 32542 | 47nF 10% 63V |
| 2413 | 4822 124 40248 | 10µF 20% 63V |
| 2414 | 5322 126 10223 | 4,7nF 10% 63V |
| 2415 | 4822 124 40248 | 10µF 20% 63V |
| 2416 | 5322 126 10223 | 4,7nF 10% 63V |
| 2417 | 4822 121 51252 | 470nF 5% 63V |
| 2420 | 5322 122 34123 | 1nF 10% 50V |
| 2421 | 5322 122 34123 | 1nF 10% 50V |
| 2422 | 4822 124 40242 | 1µF 20% 63V |
| 2423 | 5322 126 10223 | 4,7nF 10% 63V |
| 2424 | 4822 124 40433 | 47µF 20% 25V |
| 2427 | 5322 126 10223 | 4,7nF 10% 63V |
| 2428 | 4822 124 40433 | 47µF 20% 25V |
| 2429 | 5322 126 10223 | 4,7nF 10% 63V |
| 2430 | 4822 124 40433 | 47µF 20% 25V |
| 2435 | 5322 122 32268 | 470pF 5% |
| 2437 | 5322 122 32268 | 470pF 5% |
| 2438 | 4822 121 51252 | 470nF 5% 63V |
| 2439 | 4822 124 40248 | 10µF 20% 63V |
| 2440 | 4822 124 40246 | 4,7µF 20% 63V |
| 2441 | 4822 124 40246 | 4,7µF 20% 63V |
| 2442 | 4822 124 40246 | 4,7µF 20% 63V |
| 2443 | 4822 124 40433 | 47µF 20% 25V |
| 2445 | 5322 122 32658 | 22pF 5% 50V |
| 2446 | 4822 124 40248 | 10µF 20% 63V |
| 2447 | 4822 122 31947 | 100nF 20% 63V |
| 2448 | 4822 122 31947 | 100nF 20% 63V |
| 2449 | 5322 122 32654 | 22nF 10% 63V |
| 2500 | 4822 121 42408 | 220nF 5% 63V |
| 2501 | 4822 122 33177 | 10nF 20% 50V |
| 2502 | 5322 122 32654 | 22nF 10% 63V |
| 2503 | 4822 124 40433 | 47µF 20% 25V |
| 2504 | 5322 126 10223 | 4,7nF 10% 63V |
| 2508 | 5322 122 32531 | 100pF 5% 50V |
| 2509 | 5322 122 32531 | 100pF 5% 50V |
| 2510 | 5322 122 32531 | 100pF 5% 50V |
| 2511 | 5322 122 32531 | 100pF 5% 50V |
| 2521 | 5322 122 32531 | 100pF 5% 50V |
| 2522 | 5322 122 32531 | 100pF 5% 50V |
| 2524 | 5322 122 32531 | 100pF 5% 50V |
| 2525 | 5322 122 32531 | 100pF 5% 50V |
| 2526 | 5322 122 32531 | 100pF 5% 50V |
| 2527 | 5322 122 32531 | 100pF 5% 50V |
| 2575 | 5322 122 32654 | 22nF 10% 63V |

## RESISTORS

| | | |
|---|---|---|
| 3250 | 4822 116 52233 | 10k 5% 0,5W |
| 3251 | 4822 116 52233 | 10k 5% 0,5W |
| 3252 | 4822 050 11002 | 1k 1% 0,4W |
| 3253 | 4822 050 11002 | 1k 1% 0,4W |
| 3254 | 4822 116 52284 | 47k 5% 0,5W |
| 3255 | 4822 050 11002 | 1k 1% 0,4W |
| 3256 | 4822 116 52233 | 10k 5% 0,5W |
| 3258 | 4822 116 52257 | 22k 5% 0,5W |
| 3259 | 4822 116 52257 | 22k 5% 0,5W |
| 3266 | 4822 116 52228 | 680Ω 5% 0,5W |
| 3267 | 4822 116 52222 | 390Ω 5% 0,5W |
| 3268 | 4822 116 52257 | 22k 5% 0,5W |
| 3269 | 4822 116 52257 | 22k 5% 0,5W |
| 3270 | 4822 116 83923▲ | 1k5 5% 2W |
| 3271 | 4822 116 83923▲ | 1k5 5% 2W |
| 3272 | 4822 052 10471▲ | 470Ω 5% 0,33W |
| 3273 | 4822 052 10471▲ | 470Ω 5% 0,33W |
| 3274 | 4822 116 52256 | 2k2 5% 0,5W |
| 3275 | 4822 116 52256 | 2k2 5% 0,5W |
| 3276 | 4822 116 52188 | 27Ω 5% 0,5W |
| 3277 | 4822 116 52188 | 27Ω 5% 0,5W |
| 3279 | 4822 052 10479▲ | 47Ω 5% 0,33W |
| 3280 | 4822 053 11102▲ | 1k 5% 2W |
| 3281 | 4822 053 11472▲ | 4k7 5% 2W |
| 3282 | 4822 116 52283 | 4k7 5% 0,5W |
| 3283 | 4822 116 52283 | 4k7 5% 0,5W |
| 3284 | 4822 100 11683 | 2k 30%LIN 0.2W |
| 3285 | 4822 100 11683 | 2k 30%LIN 0.2W |
| 3286 | 4822 116 52243 | 1k5 5% 0,5W |
| 3287 | 4822 116 52243 | 1k5 5% 0,5W |
| 3288 | 4822 053 10222▲ | 2k2 5% 1W |
| 3289 | 4822 053 10222▲ | 2k2 5% 1W |
| 3290 | 4822 053 10302▲ | 3k 5% 1W |
| 3291 | 4822 053 10302▲ | 3k 5% 1W |
| 3293 | 4822 053 10103▲ | 10k 5% 1W |
| 3300 | 4822 116 52243 | 1k5 5% 0,5W |
| 3301 | 4822 050 11002 | 1k 1% 0,4W |
| 3304 | 4822 113 80632▲ | 0Ω22 5% 4W |
| 3305 | 4822 113 80632▲ | 0Ω22 5% 4W |
| 3306 | 4822 113 80632▲ | 0Ω22 5% 4W |
| 3307 | 4822 113 80632▲ | 0Ω22 5% 4W |
| 3308 | 4822 116 52304 | 82k 5% 0,5W |
| 3309 | 4822 116 52304 | 82k 5% 0,5W |
| 3310 | 4822 116 52252 | 180k 5% 0,5W |
| 3311 | 4822 116 52257 | 22k 5% 0,5W |
| 3312 | 4822 116 52233 | 10k 5% 0,5W |
| 3313 | 4822 116 52244 | 15k 5% 0,5W |
| 3314 | 4822 116 52271 | 33k 5% 0,5W |
| 3315 | 4822 116 52211 | 150Ω 5% 0,5W |
| 3316 | 4822 050 11002 | 1k 1% 0,4W |
| 3317 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3318 | 4822 051 20008 | 0Ω JUMP. |
| 3323 | 4822 052 10188▲ | 1Ω8 5% 0,33W |
| 3324 | 4822 052 10478▲ | 4Ω7 5% 0,33W |
| 3325 | 4822 052 10338▲ | 3Ω3 5% 0,33W |
| 3334 | 4822 050 21002 | 1k 1% 0,6W |
| 3341 | 4822 053 11102▲ | 1k 5% 2W |
| 3342 | 4822 052 10109▲ | 10Ω 5% 0,33W |
| 3346 | 4822 113 80633▲ | 0Ω1 5% 3W |

| | | |
|---|---|---|
| 3347 | 4822 051 20008 | 0Ω JUMP. |
| 3348 | 4822 051 20562 | 5k6 5% 0,1W |
| 3349 | 4822 051 20221 | 220Ω 5% 0,1W |
| 3350 | 4822 051 20562 | 5k6 5% 0,1W |
| 3351 | 4822 051 20008 | 0Ω JUMP. (0805) |
| 3352 | 4822 051 20562 | 5k6 5% 0,1W |
| 3356 | 4822 116 52195 | 47Ω 5% 0,5W |
| 3357 | 4822 116 52195 | 47Ω 5% 0,5W |
| 3360 | 4822 052 10399▲ | 39Ω 5% 0,33W |
| 3361 | 4822 052 10399▲ | 39Ω 5% 0,33W |
| 3367 | 4822 052 10188▲ | 1Ω8 5% 0,33W |
| 3369 | 4822 053 11338▲ | 3Ω3 5% 2W |
| 3370 | 4822 116 52264 | 27k 5% 0,5W |
| 3371 | 4822 116 52251 | 18k 5% 0,5W |
| 3372 | 4822 116 52244 | 15k 5% 0,5W |
| 3375 | 4822 116 52263 | 2k7 5% 0,5W |
| 3377 | 4822 116 52263 | 2k7 5% 0,5W |
| 3379 | 4822 052 10339▲ | 33Ω 5% 0,33W |
| 3381 | 4822 052 10339▲ | 33Ω 5% 0,33W |
| 3383 | 4822 116 52238 | 12k 5% 0,5W |
| 3386 | 4822 105 11023 | 1k 30%lin 0,1W |
| 3387 | 4822 051 10102 | 1k 2% 0,25W |
| 3388 | 4822 051 10102 | 1k 2% 0,25W |
| 3389 | 4822 051 10102 | 1k 2% 0,25W |
| 3396 | 4822 052 10228▲ | 2Ω2 5% 0,33W |
| 3397 | 4822 052 10228▲ | 2Ω2 5% 0,33W |
| 3400 | 4822 051 20339 | 33Ω 5% 0,1W |
| 3401 | 4822 051 20271 | 270Ω 5% 0,1W |
| 3402 | 4822 051 10102 | 1k 2% 0,25W |
| 3403 | 4822 051 20332 | 3k3 5% 0,1W |
| 3404 | 4822 051 20331 | 330Ω 5% 0,1W |
| 3405 | 4822 051 20271 | 270Ω 5% 0,1W |
| 3406 | 4822 051 20222 | 2k2 5% 0,1W |
| 3407 | 4822 051 20222 | 2k2 5% 0,1W |
| 3408 | 4822 051 20225 | 2M2 5% 0,1W |
| 3409 | 4822 051 20222 | 2k2 5% 0,1W |
| 3410 | 4822 051 20225 | 2M2 5% 0,1W |
| 3411 | 4822 051 20224 | 220k 5% 0,1W |
| 3412 | 4822 051 20224 | 220k 5% 0,1W |
| 3413 | 4822 051 20223 | 22k 5% 0,1W |
| 3414 | 4822 051 20223 | 22k 5% 0,1W |
| 3415 | 4822 051 20101 | 100Ω 5% 0,1W |
| 3416 | 4822 051 20101 | 100Ω 5% 0,1W |
| 3417 | 4822 051 20109 | 10Ω 5% 0,1W |
| 3418 | 4822 051 20221 | 220Ω 5% 0,1W |
| 3419 | 4822 051 20222 | 2k2 5% 0,1W |
| 3420 | 4822 051 20562 | 5k6 5% 0,1W |
| 3421 | 4822 051 20223 | 22k 5% 0,1W |
| 3422 | 4822 051 20221 | 220Ω 5% 0,1W |
| 3423 | 4822 051 20123 | 12k 5% 0,1W |
| 3424 | 4822 051 20682 | 6k8 5% 0,1W |
| 3425 | 4822 051 20334 | 330k 5% 0,1W |
| 3426 | 4822 051 20562 | 5k6 5% 0,1W |
| 3430 | 4822 051 10102 | 1k 2% 0,25W |
| 3435 | 4822 051 20101 | 100Ω 5% 0,1W |
| 3438 | 4822 052 10479▲ | 47Ω 5% 0,33W |
| 3439 | 4822 052 10478 | 4Ω7 5% 0,33W |
| 3440 | 4822 051 20123 | 12k 5% 0,1W |
| 3441 | 4822 051 20103 | 10k 5% 0,1W |
| 3442 | 4822 051 20273 | 27k 5% 0,1W |
| 3443 | 4822 051 20153 | 15k 5% 0,1W |
| 3445 | 4822 051 20103 | 10k 5% 0,1W |
| 3449 | 4822 051 20392 | 3k9 5% 0,1W |
| 3450 | 4822 051 20392 | 3k9 5% 0,1W |
| 3451 | 4822 051 20332 | 3k3 5% 0,1W |
| 3452 | 4822 051 20332 | 3k3 5% 0,1W |
| 3453 | 4822 117 11139 | 1k5 1% 0,1W |
| 3454 | 4822 117 11139 | 1k5 1% 0,1W |
| 3455 | 4822 051 20681 | 680Ω 5% 0,1W |
| 3456 | 4822 051 20681 | 680Ω 5% 0,1W |
| 3457 | 4822 051 20561 | 560Ω 5% 0,1W |
| 3458 | 4822 051 20561 | 560Ω 5% 0,1W |
| 3459 | 5322 100 11542 | 4k7 30%lin 0,1W |
| 3460 | 5322 100 11542 | 4k7 30%lin 0,1W |
| 3461 | 4822 051 20472 | 4k7 5% 0,1W |
| 3462 | 4822 051 20472 | 4k7 5% 0,1W |
| 3463 | 4822 117 11139 | 1k5 1% 0,1W |
| 3464 | 4822 117 11139 | 1k5 1% 0,1W |
| 3465 | 4822 117 11139 | 1k5 1% 0,1W |
| 3466 | 4822 117 11139 | 1k5 1% 0,1W |
| 3467 | 4822 117 11139 | 1k5 1% 0,1W |
| 3468 | 4822 117 11139 | 1k5 1% 0,1W |
| 3469 | 4822 117 11139 | 1k5 1% 0,1W |
| 3470 | 4822 117 11139 | 1k5 1% 0,1W |
| 3471 | 4822 051 20479 | 47Ω 5% 0,1W |
| 3473 | 4822 051 10102 | 1k 2% 0,25W |
| 3474 | 4822 051 20182 | 1k8 5% 0,1W |
| 3475 | 4822 051 20562 | 5k6 5% 0,1W |
| 3476 | 4822 051 10102 | 1k 2% 0,25W |
| 3477 | 4822 051 20182 | 1k8 5% 0,1W |
| 3478 | 4822 051 20562 | 5k6 5% 0,1W |
| 3479 | 4822 051 10102 | 1k 2% 0,25W |
| 3480 | 4822 051 20182 | 1k8 5% 0,1W |
| 3481 | 4822 051 20562 | 5k6 5% 0,1W |
| 3482 | 4822 051 20332 | 3k3 5% 0,1W |
| 3483 | 4822 051 20222 | 2k2 5% 0,1W |
| 3484 | 4822 051 20682 | 6k8 5% 0,1W |
| 3485 | 4822 051 20103 | 10k 5% 0,1W |
| 3486 | 4822 051 20103 | 10k 5% 0,1W |
| 3487 | 4822 116 52296 | 6k8 5% 0,5W |
| 3488 | 4822 051 20222 | 2k2 5% 0,1W |
| 3489 | 4822 051 20271 | 270Ω 5% 0,1W |
| 3490 | 4822 051 20103 | 10k 5% 0,1W |
| 3491 | 4822 051 20103 | 10k 5% 0,1W |
| 3492 | 4822 051 20103 | 10k 5% 0,1W |
| 3500 | 4822 051 20103 | 10k 5% 0,1W |
| 3501 | 4822 051 20103 | 10k 5% 0,1W |
| 3502 | 4822 051 20103 | 10k 5% 0,1W |

| | | |
|---|---|---|
| 3503 | 4822 051 20103 | 10k 5% 0,1W |
| 3504 | 4822 051 20104 | 100k 5% 0,1W |
| 3505 | 4822 051 20103 | 10k 5% 0,1W |
| 3506 | 4822 051 20105 | 1M 5% 0,1W |
| 3507 | 4822 051 20101 | 100Ω 5% 0,1W |
| 3508 | 4822 051 20562 | 5k6 5% 0,1W |
| 3509 | 4822 051 10102 | 1k 2% 0,25W |
| 3510 | 4822 051 20472 | 4k7 5% 0,1W |
| 3511 | 4822 051 20472 | 4k7 5% 0,1W |
| 3512 | 4822 051 20473 | 47k 5% 0,1W |
| 3514 | 4822 051 20103 | 10k 5% 0,1W |
| 3515 | 4822 051 20479 | 47Ω 5% 0,1W |
| 3516 | 4822 051 20479 | 47Ω 5% 0,1W |
| 3517 | 4822 051 20479 | 47Ω 5% 0,1W |
| 3518 | 4822 051 20479 | 47Ω 5% 0,1W |
| 3530 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3531 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3532 | 4822 051 20008 | 0Ω JUMP. |
| 3533 | 4822 051 20008 | 0Ω JUMP. |
| 3534 | 4822 051 20008 | 0Ω JUMP. |
| 3535 | 4822 051 20008 | 0Ω JUMP. |
| 3536 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3537 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3538 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3539 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3540 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3541 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3542 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3543 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3544 | 4822 051 20008 | 0Ω JUMP. |
| 3545 | 4822 051 20008 | 0Ω JUMP. |
| 3546 | 4822 051 20008 | 0Ω JUMP. |
| 3547 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3548 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3549 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3550 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3551 | 4822 051 20008 | 0Ω JUMP. (0805) |
| 3552 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3553 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3554 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3555 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3556 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3557 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3558 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3559 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3560 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3561 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3562 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3563 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3564 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3565 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3566 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3567 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3569 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3570 | 4822 051 20008 | 0Ω JUMP. |
| 3571 | 4822 051 10008 | 0Ω 5% 0,25W |
| 3575 | 4822 051 20562 | 5k6 5% 0,1W |
| 3577 | 4822 051 20222 | 2k2 5% 0,1W |
| 3578 | 4822 051 20181 | 180Ω 5% 0,1W |
| 3579 | 4822 051 20829 | 82Ω 5% 0,1W |
| 3581 | 4822 051 20271 | 270Ω 5% 0,1W |
| 3584 | 4822 051 20222 | 2k2 5% 0,1W |

## COILS

| | | |
|---|---|---|
| 5001 | 4822 146 31364▲ | MAINS TRAFO |
| 5252 | 4822 157 70599 | COIL |
| 5253 | 4822 157 70599 | COIL |
| 5254 | 4822 280 70368▲ | RELAY 36V 7A |
| 5255 | 4822 157 70003▲ | MAINS CHOKE |
| 5400 | 4822 242 72527 | CST 4MHz |
| 5401 | 4822 157 53139 | 4,7µH |
| 5402 | 4822 157 51195 | 1 µH |
| 5403 | 4822 157 51195 | 1 µH |
| 5404 | 4822 157 51195 | 1 µH |
| 5405 | 4822 157 51195 | 1 µH |

## DIODES

| | | |
|---|---|---|
| 6252 | 4822 130 61219 | BZX79-C10 |
| 6253 | 4822 130 61219 | BZX79-C10 |
| 6257 | 4822 130 30842 | BAV21 |
| 6259 | 5322 130 34563 | BZX79-C2V7 |
| 6261 | 5322 130 31504 | BZX79-C3V3 |
| 6263 | 4822 130 30842 | BAV21 |
| 6265 | 4822 130 32213▲ | BYV28-50 |
| 6267 | 4822 130 32213▲ | BYV28-50 |
| 6268 | 4822 130 30621 | 1N4148 |
| 6269 | 4822 130 30621 | 1N4148 |
| 6270 | 4822 130 30621 | 1N4148 |
| 6271 | 4822 130 30621 | 1N4148 |
| 6272 | 4822 130 30621 | 1N4148 |
| 6274 | 4822 130 30621 | 1N4148 |
| 6275 | 4822 130 30621 | 1N4148 |
| 6276 | 4822 130 30621 | 1N4148 |
| 6277 | 4822 130 30621 | 1N4148 |
| 6278 | 5322 130 30684▲ | 1N4002GP |
| 6279 | 5322 130 30684▲ | 1N4002GP |
| 6280 | 5322 130 30684▲ | 1N4002GP |
| 6281 | 5322 130 30684▲ | 1N4002GP |
| 6283 | 4822 130 82079▲ | D3SBA20 |
| 6284 | 4822 130 82079▲ | D3SBA20 |
| 6290 | 4822 130 30621 | 1N4148 |
| 6291 | 4822 130 30621 | 1N4148 |

| | | |
|---|---|---|
| 6292 | 4822 130 30621 | 1N4148 |
| 6293 | 4822 130 30621 | 1N4148 |
| 6294 | 4822 130 30621 | 1N4148 |
| 6295 | 4822 130 30621 | 1N4148 |
| 6297 | 4822 130 30621 | 1N4148 |
| 6303 | 4822 130 30621 | 1N4148 |
| 6304 | 4822 130 30621 | 1N4148 |
| 6307 | 5322 130 30684 | 1N4002GP |
| 6312 | 4822 130 30621 | 1N4148 |
| 6313 | 4822 130 30621 | 1N4148 |
| 6317 | 4822 130 32213▲ | BYV28-50 |
| 6322 | 4822 130 30621 | 1N4148 |
| 6323 | 4822 130 30621 | 1N4148 |
| 6324 | 4822 130 30621 | 1N4148 |
| 6400 | 4822 130 30621 | 1N4148 |
| 6401 | 4822 130 80937 | BAV74 |
| 6402 | 4822 130 30621 | 1N4148 |
| 6403 | 4822 130 34174 | BZX79-C4V7 |
| 6410 | 4822 130 30621 | 1N4148 |
| 6411 | 4822 130 30621 | 1N4148 |
| 6412 | 4822 130 30621 | 1N4148 |
| 6413 | 4822 130 30621 | 1N4148 |
| 6414 | 4822 130 30621 | 1N4148 |
| 6415 | 4822 130 30621 | 1N4148 |
| 6416 | 4822 130 30621 | 1N4148 |
| 6417 | 4822 130 30621 | 1N4148 |
| 6418 | 4822 130 30621 | 1N4148 |
| 6500 | 4822 130 30621 | 1N4148 |
| 6575 | 4822 209 72895 | LED TLUV5300 |
| 6576 | 4822 130 83065 | LED TLHY6405 |

**TRANSISTORS & IC's**

| | | |
|---|---|---|
| 7250 | 4822 130 40937 | BC548B |
| 7251 | 4822 130 40937 | BC548B |
| 7252 | 4822 130 44197 | BC558B |
| 7255 | 4822 209 83274 | NJM4560D |
| 7256 | 4822 130 41691 | BC556B |
| 7257 | 4822 130 41691 | BC556B |
| 7258 | 4822 130 43283 | 2SC2705 |
| 7259 | 4822 130 43283 | 2SC2705 |
| 7260 | 4822 130 63317 | 2SC3419 |
| 7261 | 4822 130 63317 | 2SC3419 |
| 7268 | 4822 130 63007▲ | 2SD1893 |
| 7269 | 4822 130 62954▲ | 2SD1895 |
| 7271 | 4822 130 62954▲ | 2SD1895 |
| 7273 | 4822 130 62953▲ | 2SB1255 |
| 7274 | 4822 130 63006▲ | 2SB1253 |
| 7275 | 4822 130 62953▲ | 2SB1255 |
| 7276 | 4822 130 40937▲ | BC548B |
| 7277 | 4822 130 44461▲ | BC546B |
| 7278 | 4822 130 40937 | BC548B |
| 7279 | 4822 209 33083 | 78M08CT |
| 7280 | 4822 209 80817 | 78M05CT |
| 7282 | 4822 209 82112 | 7908CT |
| 7284 | 4822 130 40937 | BC548B |
| 7289 | 4822 130 40937 | BC548B |
| 7290 | 4822 209 83274 | NJM4560D |
| 7291 | 4822 209 83274 | NJM4560D |
| 7400 | 5322 209 11517 | PC74HCU04T |
| 7401 | 4822 209 31615 | LM324AD |
| 7402 | 4822 209 33476 | CS8412-CS |
| 7403 | 4822 209 33403 | TDA1305T/N2 |
| 7410 | 4822 130 42616 | BC818-40 |
| 7411 | 5322 130 41982 | BC848B |
| 7412 | 5322 130 41982 | BC848B |
| 7413 | 4822 130 42616 | BC818-40 |
| 7414 | 4822 130 42616 | BC818-40 |
| 7415 | 4822 130 42616 | BC818-40 |
| 7416 | 4822 130 42616 | BC818-40 |
| 7417 | 4822 130 42616 | BC818-40 |
| 7418 | 4822 130 42616 | BC818-40 |
| 7419 | 4822 130 42616 | BC818-40 |
| 7420 | 4822 130 42616 | BC818-40 |
| 7423 | 5322 130 41983 | BC858B |
| 7424 | 5322 130 41983 | BC858B |
| 7425 | 5322 130 41983 | BC858B |
| 7426 | 5322 130 41983 | BC858B |
| 7427 | 5322 130 41982 | BC848B |
| 7500 | 4822 209 33474 | 68HC0509 DSS940 |
| 7502 | 5322 130 41982 | BC848B |
| 7575 | 4822 214 52009 | IR EYE GP1U58XP |
| 7576 | 5322 130 42136 | BC848C |
| 7577 | 4822 130 42513 | BC858C |
| 7578 | 4822 130 42513 | BC858C |